

Muslim Women's Perceptions Towards Healthcare Facilities and Treatment:

Towards a Holistic Patient-Centered Healthcare Facility for Women in Durban

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Dissertation Document

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DECLARATION:

I declare that this dissertation is my own work, unaided work carried out under supervision. All citations, references and borrowed ideas have been acknowledged. This document is submitted in partial fulfillment of the requirements for the degree of Masters in Architecture at the School of Built Environment and Development Studies, University of KwaZulu-Natal, Durban, South Africa. None of this work has been previously submitted for any degree or examination purposes in any other institution.

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I firstly thank Almighty God for granting me this opportunity to study and bringing me to an important milestone in my architectural career.

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DEDICATION

This study is dedicated to my beloved Mother and Brother, the source of inspiration for this study.

Title: Muslim Women's Perception's Towards Healthcare Facilities and Treatment: Towards a Holistic Patient-Centered Healthcare Facility for Women in Durban

Key terms: Respite Care; Caregiving challenges; Informal Caregiver; Muslim Women; Perception; Wellness Centre; Therapeutic Architecture; Islamic architecture; Spirituality; Nature.

ABSTRACT

This document sets out to highlight the issues and challenges of caregiving that relate to the development of a Caregiver Respite Facility referring to literature that helps motivates the enormous need for more Respite Care initiatives in South Africa. Respite Care initiatives are highly beneficial to the Caregiver and their family (Mannan, et al., 2011).

The study aims beyond the pragmatic issues that affect Caregiver Respite Facility design, offering an improved conceptual approach to such facilities: focus on the holistic needs and wellbeing of the Caregiver rather than simply offer respite. Great potential can be unlocked in a mixed-use Wellness Center typology that fuses Respite Care with a Caregiver Retreat with additional support functions that assist Caregivers and their families to use their respite period within a therapeutic environment to heal, restore their health and be equipped with skills to deliver better quality care.

The study then gathers perceptions of an Islamic Wellness Facility through the lens of its intended user, female Muslim Caregivers, and Volunteers as health and illness are an integral part of the Islamic faith. Religion and spirituality are central to the Muslim patient and their illness related practices and often used as a coping mechanism (Eltaiba & Harries, 2015). Therefore, these considerations may help develop an appropriate architectural response for such facilities, that ensures a restorative and therapeutic experience that helps reduce the impact of caregiving on the individual. This study could enhance and give clearer direction to the design of a Respite Facility by gathering the user's perceptions relating to such development. Furthermore, drawing upon the theory of biophilia (Wilson, 1984), this study tries to re-connect the user to nature within the built environment. Nowadays, healthcare environments are rarely designed to enhance the natural connection or the spiritual experience, while Islamic architecture also seems disconnected from nature.

All in all, this document hopes to promote awareness around informal Caregivers challenges, the need for better support facilities in the women in the Muslim community, to highlight the importance of nature within the built environment and to reconnect contemporary Islamic Architecture in Durban back to nature.

DEFINITION OF THE TERMS:

Informal Caregiver:

The informal Caregiver is described as an individual who, without financial compensation, physically takes care for an impaired relative, child, elderly parent, spouse or even other relatives (Villiers, et al., 2008). Caring for an individual is a challenging task, especially since many informal Caregivers are the marital partner, elderly and not professionally trained in the task of caring. In many cases, they are an elderly woman. Caregivers are usually emotionally attached to the patient prior to the onset of illness as 90% of Caregivers were spouses who are always there to take care of the Care recipient's requirements.

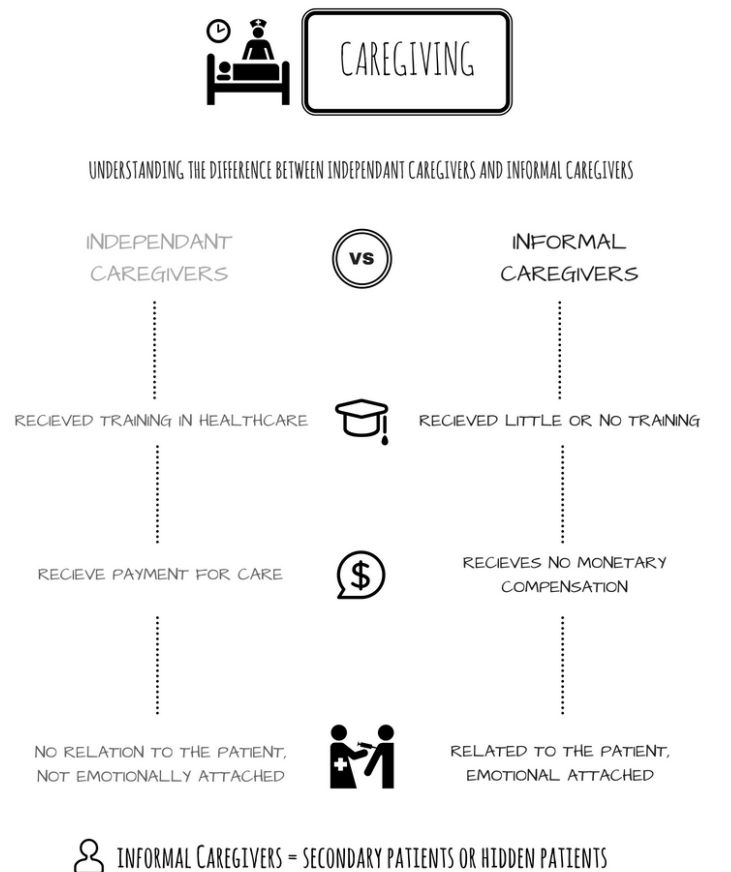


Figure 1 Key differences between independent and informal Caregivers. Source: Author (2016)

The informal Caregivers' emotional connection with the Care-recipients is, therefore, greater than that of formal or independent Caregivers as professional distance cannot be upheld. The stress experienced by them is also worsened as a result of the progression of the disease or enormous financial burden that

the condition places on the family. Key differences between independent and informal Caregivers are highlighted in Figure 1.

Respite Care

The word “respite” is used in the context of rest or relief. The concept of respite care can be described as a gift of time for allowing the caregiver to refresh themselves, usually provided by a group of professionals, family members or volunteers within a community of the informal Caregiver. Respite care is identified as a service or provision of relief for families with developmentally disabled family members living at home which helps prevent institutionalization of disabled persons. It assists families to cope better with both emergency circumstances and relieves them from the everyday stress of caring for a family member who is disabled or ill. Respite care is a concept which has been developing since the late 1960's but has only recently beginning to obtain the attention and support it deserves (Upshur, 1983).

Respite care could be categorized into 3 types as shown in Figure 2 above: in-home, short term or long term respite care (Stirling, et al., 2014). These aimed at reducing the Caregiver's burden. Short term respite, which will be the focused on in this dissertation, involves the Care-recipient staying a few hours during the day or even a few days of care in a facility away from their home. Respite care is regarded as an essential service for Caregivers and their families.

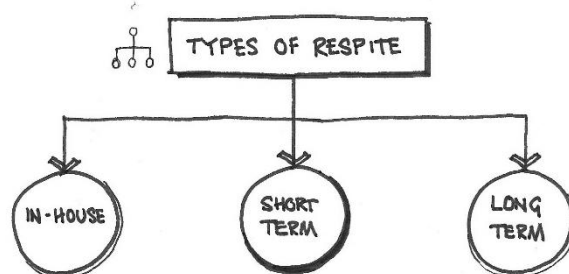


Figure 2 Categories of respite care. Source: Author (2016)

Muslim:

A Muslim is an individual who follows the religion of Islam. The word Islam literally means to submit or to surrender, thus a Muslim is one who surrenders to the will of Allah¹. Muslims are not of any particular racial group and are recognized by their practice or believe in the five basic Islamic principles (Emamally, 2003).

Perception:

The way in which something or a concept is regarded, understood or interpreted (Oxford University Press, 2016) by a person or group of people.

Care Recipient:

In this study, the Care Recipient refers to the primary patient who is either ill or in need of supervision, that is receiving care from the informal Caregiver.

Caregiver Retreat:

A Caregiver retreat refers to a place where a Caregiver can rest, relax and rejuvenate in a setting that is tranquil, with others who share the same concerns. These are planned specifically for informal Caregivers to relax, take a break or to be alone, and get away from their daily responsibilities or from the Care recipient for a short period of time. These initiatives are planned throughout the year, specifically for the informal Caregiver as a 1 or 2-day program².

Biophilia:

A genetically determined characteristic of attraction or affinity of humans with the world of nature (Foote, 2015). Biophilic design is about, preserving, harnessing or showing love towards nature and working with

¹ The Supreme being, God almighty

² National Centre on Caregiving, (2016)

it in the built environment (Hassel, 2015). Biophilia must not be confused with biomimicry, which is the application of inactive copies of structures inspired by or found in nature to a building's facade or structure.

Islamic Architecture:

Whenever the term Islamic Architecture is used, one has the perception of buildings with arches, minarets, domes and calligraphy used as ornamentation or building structures built during the Medieval times, constructed by Muslim rulers, and found mainly in Islamic countries of the middle east or Asia³.

However, there are numerous buildings that incorporate minarets or arches but in no way represent Islamic Architecture. On the contrary, there are various buildings without arches or minarets, that display a strong representation of this architecture.

Akhtar, (2010) argues that it is coincidental that when the message of Islam spread, the construction industry at the time utilized arches and domes to create larger built spaces, thereby receiving greater support with Islamic development at that time and this also allowed this construction to be perfected. Furthermore, symmetry is considered as a prominent feature of this type of architecture. Again, according to the author Akhtar, (2010), it is a mere coincidence that in that period, this was one of design features that were a trend due to several other factors. These, according to him, should neither be attributed totally to Islam nor should it be used to limit Islamic Architectural approach.

The consequence of accepting these limitations is that, when the technology of construction advanced with next generation of technology, it gave one the impression that with this the transition in building technology in the chapter of Islamic Architecture stands closed, which is not the case. What is being built with the next generation of building technology will as a result then be excluded from Islamic architecture!

However, the term Islam according to Akhtar, (2010), can neither be confined to any place, region, nor to any period in history. The term Islam, although originating back to Arabia 1400 years ago, still has

³ Akhtar, (2010). *Professor Syed Mohammad Akhtar is the Founder, Dean of the Faculty of Architecture & Ekistics, Jamia Millia Islamia, New Delhi.*

universal meaning and will remain there for all times. Akhtar, (2010) states that the term 'Islamic', when used in conjunction with 'architecture', should mean that the architecture is timeless as well as universal in nature. Islamic Architecture, like Islamic philosophy, has to be up to date and relevant for all times and all situations and context.

Islamic Architecture, according to the author Akhtar, (2010), needs to be 'liberated from its own shadows' in order to pave the way for a development of contemporary Islamic Architecture, that will contain the spirit and display the expression of Islamic philosophy. This, according to him becomes more relevant today globally, as modern day architecture is heading towards hollowness, aimlessness, confusion. It is confusing and mutilating in nature. The challenge for architects is to steer the dynamics of present day architecture towards more rational and logical objectivism (Akhtar, 2010).

What does Islamic architecture include? Islam shaped specific ideas and styles about dwellings and other architectural forms (Ibrahm, 2012). Islam is a lifestyle and philosophy that emphasizes multicultural living, discipline, order, rhythm, simplicity and truthfulness, functionality harmony, care for nature and human value. The allure of Islamic Architecture is in its multicultural feel, strong discipline, scale, the truthfulness of form, purity of geometric form, functionality, and clarity of its expression (Akhtar, 2010). Thus, the author attributes the following elements to Islamic Architectural approach: purity of form, strong geometrical order, clarity of the surface treatment, honesty of materials utilized, harmony and functionality.

Traditional Islamic Architecture has always followed strong geometrical order and discipline with flawless balance, which could be considered the essence of Islamic Architecture (Akhtar, 2010). For example, widespread use of the 'Jali' is not just for adornment but utilized in Islamic Architecture for energy efficiency. It is effectively used as a shading device that responds to the climate by reducing heat gain, regulating the flow and direction of the breeze. This approach in Islamic Architecture is to endorse the sensitivity towards climate, nature and improve energy efficiency (Akhtar, 2010).



Figure 3 A traditional timber Jali. Source: http://bsu.edu/artinsight/Timeline/timeline_india1.html (Accessed: October 2016)

Then what does it Islamic architecture exclude? A clash in the form or expression in its façade treatment cannot be Islamic Architecture. The Islamic approach should symbolize purity and truth, therefore any architecture that does not display honesty of materials or expresses visually polluted forms or elements must not be considered Islamic architecture. Islam is all about harmony with nature, thus defying nature cannot be Islamic Architecture (Akhtar, 2010).

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1 CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND

According to Walker, (2011), there has been an acknowledged proliferation in the incidence and prevalence of non-communicable diseases, like cancer, in low and middle-income nations. The rising incidence of such diseases and the lack of good quality facilities or professionals to support the new patient population, particularly in Africa, has put the care of these patients in the hands of close relatives and friends. The friends and families then play the vital role of the primary Caregiver. The transition from being a family member or close friend to care provider to loved ones usually occurs unexpectedly or suddenly. There is little time for the informal Caregiver to prepare themselves or even learn to perform the basic but important tasks that are essential throughout these situations. This transition has a great negative impact on the informal Caregiver's life as they take on new roles and responsibilities. This problem also has a significant impact on health as it decreases the quality of life for affected individuals, emotionally, physically and is a cause of premature death. It economically affects families, communities, and societies at large.

If the Caregivers' emotional and physical health is not well looked after or supported, the quality of care they are able to provide in the future will be severely compromised. This will result in greater demands on the already burdened, existing public healthcare facilities by both the Care recipient and informal Caregiver. The existing healthcare facilities may not be able to deliver good quality care to the Care recipient, who solely depends on the informal Caregiver for even basic support. Addressing Caregivers needs will help free up space in public healthcare facilities, thus benefiting the not just one community, but rather the broader population.



Figure 4 A typical healthcare environment in South Africa. Source: www.kznhealth.gov.za (accessed: June 2016)

This study intends to propose architecture assisting the therapeutic or restorative healing process, as a conceptual approach to the design of a Caregiver Respite Facility in relation to informal Caregivers and their families. How can the design move away from typical healthcare environments as seen in Figure 4 that they are so often exposed to? Therefore, an alternative environment that assists them in reducing the impact of caregiving should be proposed. These concepts are compared with precedent studies and case studies combined with qualitative research to guide the architecture into becoming part of the therapeutic process in itself. This study is arguing for an alternative, against the idea of simply developing a respite facility for caregivers, but rather it aims to transcend beyond, proposing architecture as a tool of therapy, connecting the caregiver to community, nature, and enhancing the feeling of spirituality to help

holistically reduce the impact of caregiving burdens on Caregivers and their loved ones. The Architecture should be considered just as important as the respite and other support activities that it facilitates.

Architecture that assists the therapeutic or restorative healing process can be viewed from a conceptual paradigm; the purpose of this study is then to challenge the notions of Caregiver Respite Facilities merely being nursing homes that provide care for the Care-recipient while the Caregiver is given time off is the best solution. This concept provokes a shift of paradigm and blurs the boundaries of typology to further an individual's thoughts, help reduce the impact of caregiving on the body, and develop a sense of community awareness around the challenges of caregiving. Architecture's potential to play a greater role in the therapy can be strengthened through its strong and lengthy association with nature and its power to evoke a sense of the spirituality through its order, spaces and decorative elements. The inhabitant's journey encompasses manipulations of natural elements, contemplative spaces and sensory stimulation within a particular environment to act as a catalyst for healing. The architecture now becomes a conceptual vehicle, intended to intentionally provoke a paradigm shift to focus on the needs of the informal Caregiver.

1.2 JUSTIFICATION OF THE STUDY:

1.2.1 Developing Healthcare Facilities in South Africa

Access to healthcare for all citizens in South Africa is constitutionally enshrined in the constitution; yet, significant inequities still remain, largely due to distortions in resource allocation. Achieving the provision of accessible, good quality primary health care facilities, leave alone caregiving facilities for the rest of the population. Furthermore, trying to accommodate 'differential needs' of minority groups and the financial limitations of previously disadvantaged groups is unfortunately still a distant reality in South Africa. The Country's apartheid past and corruption continues to shape the provision of healthcare, and inequalities of resources. Racial, economic, and urban-rural distortions in services in the public and private health sectors remain challenging. As a result of this *status quo* that communities some communities and non-profit organizations have to mobilize themselves and put together resources to ensure that the wellbeing of the vulnerable is taken care of.

Eltaiba & Harries, (2015) suggest that there is a great need to study the various Muslim communities' perspectives on health-related issues. Much scope then lies in researching health and wellness related studies in the South African context since, according to Dangor (1991), in South Africa, Muslims constitute of a vibrant, organized community whose activities have become evident. Furthermore, the need for Respite Care for informal Caregivers in this country is becoming more evident. Development organizations and charities such as National Foundation of Awqaf South Africa plan to develop the DarusShifa⁴ concept as well as another community welfare organizations: Cancer Support Group showing clear intent to develop a Respite Facility in Durban⁵ in the near future.

⁴ www.awqafsa.org.za/darusshifa-concept-document/ (accessed: August 2016)

⁵ <http://alansaar.co.za/wp2/portfolio-item/cancer-support-group/> (accessed: August 2016)

The understanding of the function of a Respite Facility is not as popular, most people during the development of this study, sincerely declared ignorance to the term “respite” and required an explanation. While these noble initiatives should be welcomed, this document would motivate for such facilities to focus on the needs and wellbeing of the Caregiver rather than simply offer respite as mentioned earlier. Throughout the exploration of this study, it appeared that informal Caregivers have no knowledge about short-term Respite options and most reluctantly resorted to seeking in-house respite from a family member, friend or neighbor.

1.2.2 Development of Islamic Healthcare Facilities

Makwemba, (2004) argues that the Prophet Muhammed ﷺ statement that for every disease there is a cure, compels Muslims to pursue studies in the field of medicine and its branches. This may have inspired them to build hospitals where the patients could be given proper medical care. Historically, the formal first Islamic institution for the sick was built by the Muslims in Damascus in 706 A.C. during the rule of Caliph Walid ibn Abdul Malik. This brings one to the point that Muslims need to recommit their resources to healthcare development, as done in earlier times, as stated by Makwemba, (2004). In the light of Islamic principle, the author also argues that socio-economic development is based on concepts of equity and moderation, providing a balanced life within the boundary of the fundamental value system of Islam. Development, according to him, would not only mean material but also include the spiritual development of the people and their community in order to maximize socio-economic welfare and the ultimate benefit of mankind.

Furthermore, according to Eltaiba & Harries, (2015) religion, spirituality and the will of God Almighty was a central theme amongst Muslim patients. From the outcome of their study, it could be said that spirituality is commonly used as a coping mechanism and is should be regarded just as important as gaining medical knowledge or skills to cope with the sickness. Therefore, the important for Muslims, when committing

their resources to the development of healthcare facilities, to ensure the spiritual component is given as much thought as one would give to the educational component of the design, as this is beneficial to the Muslim community. Through this document, the need for a healthcare facility which strengthens the spiritual experience of the Caregiver will be justified, as this would, in turn, strengthen their coping mechanism.

The Islamic approach to treatment encompasses the physical, psychological, emotional and spiritual requirements of individuals, thus ensuring and enhancing the quality of their life. Islamic medicine traces its roots back to the Hippocratic principles of cause and effect. It also epitomizes a “science of medicine”, if then practiced within a truly Islamic ethos that recognizing that the source of all healing comes from the Creator, could become “the art of care” (Walton, et al., 2014). Thus, it is recommended that further exploration into an Islamic approach to care for informal Caregivers within a population should be considered.

1.3 DEFINITION OF THE PROBLEMS, AIMS, AND OBJECTIVES

1.3.1 Definition of The Problems

While there is a general ignorance surrounding the availability of respite care, reluctance to use respite where available is also a problem. The public perception that people who are ill only go to a hospice to die is incorrect (Anon., 2013). Patients could go to such facilities for even a two-week period in order to provide respite to their family members. Most patients prefer to return home after two weeks unless the conditions at home are not suitable example having no privacy, or there is no supervision available. Furthermore, informal Caregivers show contradictory feelings towards using respite services. While some are simply reluctant to relinquish caregiving duty; others express feelings of guilt they experienced even though they are aware of the benefits. Some Caregivers express the sentiment that other Caregivers could be in greater need of respite than themselves. This could be due to the fact that majority

of countries do not have any identified respite care services and a high number of people globally lack adequate access to basic care.

1.3.2 Aims:

The fundamental aim of this study is firstly to highlight that informal Caregiver's challenges do exist and motivate why informal Caregivers will require just as much attention, care and healing and need to be the focus of the intervention as they are in reality the 'hidden patients' whose need have to be addressed through careful planning design. Secondly, the aim is to explore the possibility of developing an architectural response that holistically addresses the needs of the Muslim informal Caregiving women.

This information gathered in this study will assist in shaping and improving the design and experience of such community facilities in the near future. This study will conclude with a design that can connect Muslim informal Caregivers in Durban to better support, training, community, nature, evokes a stronger sense of spirituality and improve social and community interaction.

Finally, this study will explore the concept of a Respite Facility that is restorative in nature for the users and highlight issues surrounding the development of community facilities for the Muslim women. It will, however, focus greatly on the role of an Islamic architectural approach in holistically accommodating the social and spiritual requirements of the Women in this community often neglected in their community facilities and conventional health facilities. Emphasis will be placed on healing through a sensory experience and connection to nature. This will be done by trying to find the core essence of traditional Islamic architecture and its links to nature in order to improve human wellbeing. It is also hoped that this document will provoke further studies on the Caregiving challenges and improve the quality of contemporary Islamic architectural development for the future in Durban.

1.3.3 Objectives:

- To motivate the need for a Caregiver Respite Facility in Durban.
- To explore the female Muslim Caregiver's perceptions/attitudes to a proposed Caregiver respite and wellness environment.
- To gather recommendations from female Muslim Caregivers that can guide the design and experience of a Respite Facility in Durban.

1.4 SETTING OUT THE SCOPE:

1.4.1 Limitations of the Research:

- The study will mainly explore 'short-term care' for stable patients deemed fit for discharge from hospital and usually allowed to return home. The patients attended to in such a facility are stable, are not in need of specialized equipment or supervision.
- This study is not carried out with the aim to explore "recovery" or finding a "cure" for caregiver burnout as a conceptual framework but aims to acknowledge informal caregiving challenges and make it clear that spiritual or religious preferences do exist amongst Female Muslim Caregivers or Volunteers.
- This is a case study of informal Caregivers from a single community, excluding any final conclusion or generalizations; additional studies examining informal Caregivers' expectations of informal Caregiver respite are required. Future research including a multi case-study approach, that includes informal Caregivers participant from a broader variety or from different organizations or communities may be necessary.

1.4.2 The Assumptions

- All Respite Care Facilities are merely framed or categorized in terms of a mere 'rest for caregivers' and are beneficial to the Care recipient and Caregiver and their families.
- Most healthcare environments utilized by informal Caregivers for the Care-recipient they look after or even for themselves are commercially run entities, sterile, stressful places that lack warmth or homeliness. These environments are rarely designed to enhance or improve their mood, spirituality or connect to nature.
- Spiritual or religious preference does exist among Muslim patients and therefore the need for a design that accommodates religious practices or evokes a sense of spirituality, thereby strengthening their coping mechanism.

1.5 KEY QUESTIONS

1.5.1 Primary Questions

- What does the literature say about the experience, needs, and impact of caregiving on informal Caregivers?

1.5.2 Secondary Questions

- What are informal Muslim Caregivers or Volunteers perceptions of wellness environments and respite care, in relation to their needs in Durban?
- What design recommendations can be made for a Caregiver Wellness Center for Durban in terms of the following:

Function:

- How can a Respite Care Facility improve to accommodate the Muslim informal Caregivers?
- Should Respite Care facilities be designed as a stand-alone facility or a mixed-use facility?
- What facilities can be integrated into the facility to improve the function of the Respite Care facility if designed as a mixed use?

Experience:

- How can the design of a Caregiver Respite Facility enhance the experience and restorative effect for the informal Caregiver?

Design considerations:

- What are the religious or spiritual considerations when designing for the Female Muslim Caregivers?
- What are the design considerations for accommodating Female Muslim volunteers, organizations and their activities (for the daily running of a Respite facility)?

1.6 HYPOTHESIS

A proposition as a basis for reasoning is made: Respite Care Facilities merely act as nursing homes that care for the primary Care recipient while the informal Caregiver is given a chance to take a break from caregiving duty. The purpose of this study is to challenge this notion. A short break from caregiving duty does not do justice to the vital needs of informal Caregivers, they require more than just a 'short break' away from the Care recipient and could use this respite constructively to uplift themselves. This study will then test the idea of a Respite care, through a well-designed environment, could progress into a Caregiver Wellness Center that does more to empower, assist and heal informal Caregivers.

1.7 RESEARCH METHODOLOGY

The study will be conducted in the City of Durban, Kwa-Zulu Natal within the year 2016. It is unfortunately, South Africa's apartheid past continues to shapes resource inequities especially in healthcare service. Disparities in rural-urban, public-private health sector and socio-economic factors, still remain a challenge 22 years into the achievement of freedom from apartheid and the development of the democratic state. There is great ignorance surrounding the concept of respite. While the demand for informal Caregiver respite in facilities like a hospice or Respite Care Facilities may be increasing, such the Government does not provide these services.

This study was intended to be approached as qualitative research only. The research quality in this study could be severely dependent on the individual skills of the researcher undertaking the study if influenced by the researcher's personal biases and eccentricities. The researcher's presence during data gathering may also affect the subjects' responses. Therefore, great effort was taken to avoid influencing the Subjects at the time of data collection and a peer-review may be helpful and highly necessary. The Rigour

can be difficult to maintain, assess, and demonstrate in qualitative methods compared to quantitative methods. The findings in the study could be more difficult to characterize in a visual way especially when trying to translate finding back to an architectural design and will be time-consuming compared to quantitative methodologies. The volume of data, analysis, and interpretation was reduced to save time as this was rather frustrating.

1.7.1 Sampling:

The Cancer Support Group was requested to share their perspective relating to respite care initiatives for Caregivers in Durban. This Group consists of Muslim and non-Muslim professionals, mainly women who are actively involved in supportive, guidance and care initiatives mainly for female cancer patients in Durban and are looking to develop respite care facility.

The unit of analysis for the study are female Muslim Caregivers or volunteers involved in the field of caregiving or welfare within the community. Twenty interviews were conducted with female Muslim informal caregivers or volunteers that lend support to caregiving activities. Convenience sampling was utilized to recruit only willing participants. Chosen participants were known to the researcher prior to the study. A basic questionnaire was developed to gauge current awareness or ignorance regarding respite care facilities. questions were mainly pertinent to the caregiving challenges in Durban and perceptions or attitudes towards a proposed respite initiative and recommendations relating a Caregiver Wellness Centre.

Most importantly, it must be emphasized that no attempt was made to interview critical, chronic or terminally ill patients directly. Research in the field of health and wellness is generally of a confidential nature when dealing directly with ill patients. However, the careful interrogation was conducted in a manner that was professional and understanding the sensitivity required. The study focused on subjects

that relate to design, environment or space, and not directly to any trauma, illness experienced. The questionnaire steers clear of asking the informal Caregiver or Volunteer the nature or details of the person being cared for or their medical history, illness or any question of a personal nature for that matter. Interviewees were reminded not to disclose the nature of the illness of the Care-recipient or related information. The questions in this study focus greatly on the function and experience of a proposed Caregiver Wellness Centre in relation to the built environment.

1.7.2 Research Material:

The research was divided into primary and secondary research. The primary data was collected using interviews and case studies and will be utilized to build a better understanding of the research problem from the first-hand experience. The secondary research, collected in the form of a literature review and precedent studies, explore the existing body of knowledge regarding the theory of Biophilia and its relation to the design of a healing environment for informal Caregivers.

Primary Methods (Interviews)

Several selected, semi-structured interviews were conducted in Durban:

- Female Muslim Caregivers or Volunteers from welfare organizations in Durban who focus on Muslim patients were purposively selected for semi-structured interviews due to their knowledge and experience with the Muslim community.
- The interviews conducted were aimed at determining what kind of challenges they are currently exposed to and how to address these problems in the design.
- Twenty female Muslim informal Caregivers in Durban will be randomly selected for informal interviews.

The aim of these interviews is to understand the perceptions or towards an Islamic healing environment and attitudes towards respite to determine how to adapted the function of the caregiving environment to suit their needs holistically.

Primary Methods (Case Studies)

The case studies are observations and evaluations of health care or religious facilities which cater for individuals in the Durban area. A purposive selection of two community facilities provides an opportunity for critical analysis of the contextual and environmental factors which impact people's perceptions and experiences of contemporary Islamic Architectural.

Ahmed Al-Kadi Private Hospital was selected due to its Islamic design approach which provided insight into the functioning of a healthcare environment for Muslim patients. This newly constructed facility also provided a both architect and client's understanding of Islamic healthcare environments and design.

Al-Hilal Islamic Centre was selected because of its contemporary Islamic design and the existing built environments were repurposed and adapted to suit the needs of the Muslim community.

These case studies also provide a deeper understanding of how the built environment was designed to address wellbeing and of its shortcomings. The first-hand observation, together with input from the architect are analyzed through the case studies and will be supplemented with feedback from interviews.

Secondary Methods (Literature Review)

The literature review in this study analyses and discusses the existing bodies of knowledge found in published references such as books, peer-reviewed journal articles and in unpublished references such as thesis, dissertations, and documents from online sources. The relevant literature relates to the impact

of informal Caregiving, perception, Biophilia in the built environment and how these could all relate to each other.

Secondary Methods (Precedent Studies)

This will involve the careful review of published architectural work or historical documentation on existing architecture. The buildings will be specifically selected for their relevance to restorative to the well-being of the user and the consideration of the architectural elements determined in the research. These precedent studies will be used to give clarity to the ideas put forward in this dissertation and show how other architects have approached the issues of therapeutic design, connection to nature and sensory experience of built environments designed for improving the health and wellness. The study will seek to emphasize relationships that exist within the topic and the conclusion from the study will be used as recommendations that will be utilized in the design of a holistic Caregiver Wellness Centre.

1.8 DOCUMENT OUTLINE

The initial part of this document will look at existing knowledge available and new research carried out by this study that could help understand the issues surrounding Caregivers and respite. This will include the precedent studies and case studies of the built environment that would be beneficial in relation to the theory and typology discussed in this document. The latter part of this document will then progress into the implementation of the data into the architectural design process, site-specific design proposal and a design report of a Caregiver Wellness Centre to test the conceptual ideas discussed earlier.

1.9 TYPOLOGY

Respite care can be provided in any setting, not necessarily at a hospital facility. The respite can either delivered to the patient in the hospital, hospice or even a patient's home. This study is not proposing a

hospice as the focus of a hospice is primarily on the Care-recipient, not the informal Caregiver⁶. Rather the proposed typology is a combination of an informal Caregivers respite facility, Caregiver retreat, spiritual and educational support functions together with social spaces for the community in order benefit the Caregiver. Community participation is an important component to help informal Caregivers overcome the feeling of isolation or the notion that nobody else cares or that they are the only ones burdened by caregiving duty. Respite care may also be more effective when there is teamwork that involves the greater community or social support in caregiving.



Figure 5 Diagram showing the components of this new mixed use typology. Source: Author (2016)

⁶ Anon., (2010)

Many individuals have the desire to make some contribution but feel they are not prepared enough to deal directly with patients who are ill. Interestingly enough, volunteers at respite care facilities like hospices will seldom see a patient because they are involved in numerous other activities, which range from fundraising to administration work, deal with finances or even gardening (Anon., 2013). Thus, the typology of this study is a Caregiver Wellness Centre aimed at providing informal Caregivers respite, while also support them holistically, often neglected by other Caregiver retreat initiatives, as highlighted earlier in Figure 5.

An example of Caregiver retreat activity can be seen in Figure 6. While these activities could be beneficial, it can be challenging to find respite care for the care recipient for the retreat period. Thus this new typology aims to solve this problem by facilitating both respite and retreat within the program of a single facility that helps reduce the impact of informal caregiving and promote healing.

Reiki Awakening Academy

Caregiver Relief Retreat

Aug 2-3, 2014
Mohican State Park Resort & Conference Center
 (approximately midway between Cleveland & Columbus Ohio)

ALL INCLUSIVE! overnight accomodation, healthy meals
PLUS skilled experts to pamper **YOU** in

Reiki Energy Healing Sessions:
Guided Meditation
Yoga
Crystal Grids
Aura Camera
Chakra Balancing
Nature Walk
aromatherapy
plus informational chats on
caring for the caregiver, nutrition, trends
and MUCH MORE

included!
no extra cost

Any caregiver welcome...
 nurses, moms, social workers, massage therapists ...
 anyone who cares for people and needs care!

\$275 single, \$225 double,
group rate: \$250 single, \$200 double
(groups of 5 or more inquire as to rate)
Contact Connie 614-989-4550 or
Connie@ReikiAwakeningAcademy.com
<http://reikiawakeningacademy.com/store/caregiver>
Check, PayPal or Credit Card
Time out for YOU to become refreshed, renewed & rejuvenated

Figure 6 An example of a Caregiver Retreat aimed at rejuvenating the informal Caregiver. Source: <http://reikiawakeningacademy.com/caregiver-burnout-relief/> (accessed: June 2016)

Furthermore, Architecture as a part of therapeutic and restorative healing process provides the conceptual grounding for this study. The purpose of the study is not only focused on Caregiver and Care-recipient but to encourage the reconnection of the healthcare environment to community and nature. This approach then suggests the potential to generate a new architectural typology with which the design of its spaces and elements within an urban public environment produces therapy and positive treatment for informal Caregivers. Both the informal Caregiver and Care-recipient will receive a positive change of environment and holistic treatment while promoting community engagement from the Muslim Community.

1.9.1 The Stakeholders:

1.9.2 National Awqaf Foundation of South Africa (Awqaf S.A)

The Awqaf S.A website⁷ explains the basic idea and demand for the establishment and implementation of their concept called DarusShifa⁸ Healthcare centers in South Africa in cooperation with other local NGOs. According to this organization, the elderly and infirm within the society of all races, beliefs, and ages need a respite facility at some time or another. During the apartheid era, much of the government financial support for such institutions was denied or severely limited for the non-white communities. However, communities still have to struggle themselves with little or no government support. As a community-based charitable Institution, this organization deems it necessary to organize projects that cater to the needs of the frail and infirm within these facilities. Through this document, it would be argued that the core focus of the development of such a concept should be placed on relieving and healing the Informal Caregiver.

⁷ www.awqafsa.org.za/darusshifa-concept-document/ (accessed: August 2016)

⁸ meaning an place of Cure.

Aims and objectives

- To provide a warm, comfortable, safe and engaging homely environment that facilitates appropriate medical care for patients irrespective of race, color.
- To provide a Day Care facility, a base for home-based care and overnight respite accommodation catering for temporary or permanent patients/clients.
- To educate informal Caregivers and volunteers with the necessary skills they require.
- To operate professionally with an underlying Islamic ethos and spirit.

The aim is to establish a well-managed facility, giving informal Caregivers and Care-recipients the experience of a restorative environment, with entertainment, indoor activities, and well laid out areas for exercise, walks, and other outdoor activities. Children and family can spend quality time with the Care-recipients.

Facilities

The Facility should incorporate some of the following:

- Respite Centre (overnight accommodation)
- Day Care Centre (with safe social space)
- Caregiver Training Centre
- Day clinic & Dispensary
- Income generating amenities such as a hall, auditorium, mini conference center; self-catering units for family support; children's play areas.

1.9.2.1 Partnership

A partnership with an organization with similar objectives, like the Cancer Support Group could be beneficial resulting in a true community-based welfare project created for the purpose of providing assistance in understanding the illness, sharing of experiences and to provide support to those affected by illness.

The Support Group assist in reducing stress and fear and to further expand the quality of life patients affected by cancer and to empower its members with crucial information about the disease and illness. Although being Islamic based, the group caters to both the Muslim and Non-Muslim community in Kwa-Zulu Natal. The Group also aims to provide amongst others, the following services to the community⁹:

- a mobile library
- a transport service for patients requiring treatment
- a Respite Centre

Interactive meetings and awareness programs are held throughout the year, where time is allocated for Patients and informal Caregivers to meet and share experiences, considerations, and suggestions in relation to the disease and participate in group interaction, behavioral training, and information sharing. Speakers cover topics that include: diet, motivational talks, and spiritual upliftment. The Group also teaches coping skills, offer emotional support and comfort, reduce anxiety and is a platform for people to express their mutual concerns. Oncologists, physiotherapists, psychologists, dermatologists and other therapist provide support and guidance for emotional and social problems to all patients, informal Caregivers, and family members (as highlighted in Figure 7). The support group discusses behavioral training which involves muscle relaxation that consequently reduces stress to cope with the effects of

⁹ <http://alansaar.co.za/wp2/portfolio-item/cancer-support-group/> (accessed: August 2016)

radiation therapy and chemotherapy¹⁰. The experts involved in the support group talk about illness-related topics in their seminars presentations on the disease and treatments options available. These presentations are followed by a question-and-answer session. Other activities run by the Group are the Pamper Day and Year End Chai Day¹¹.

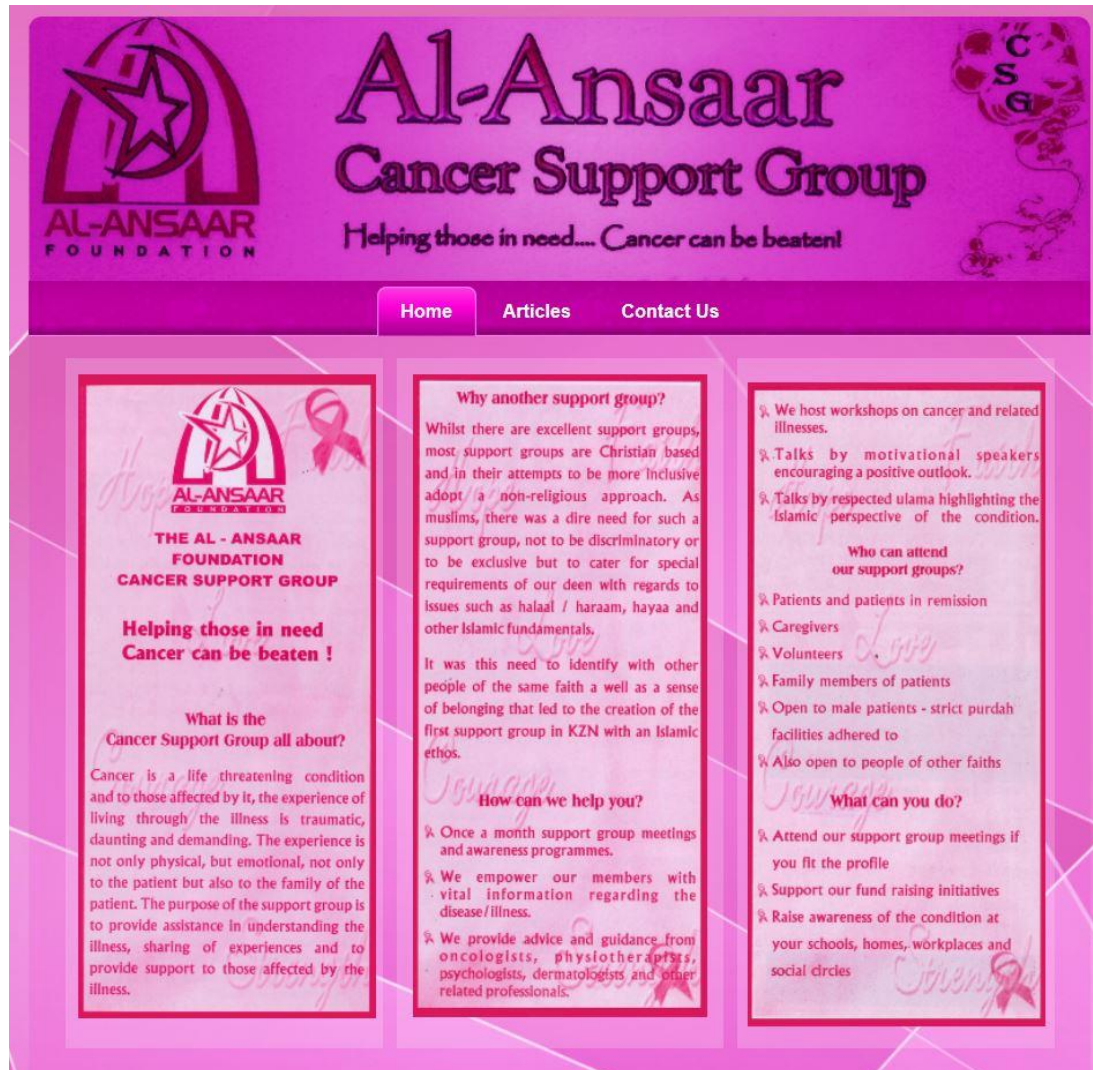


Figure 7 A screengrab of the Cancer Support Group webpage. Source: <http://www.cancersupportgroup.co.za/> (accessed: 2016)

It could be said that the Support Group is about promoting and sharing of knowledge, providing social, emotional support, comfort and reduction of stress for patients and their Caregivers through seminars,

¹⁰ <http://alansaar.co.za/wp2/portfolio-item/cancer-support-group/> (accessed: August 2016)

¹¹ Ibid page 21

therapy sessions, and spiritual practices. Full advantage must be taken reflect these approaches to assist the patient and Caregiver within a therapeutic environment. This study will seek to find design recommendations that will guide the development of a Caregiver Wellness Facility that could greatly benefit an organization such as this, as the focus of this study will be the same as the Group's focus, i.e. Female Muslim informal Caregivers. All in all, it is hoped that this study will be of great benefit to such organizations that see the need to develop Respite Care in the near future.

2 CHAPTER 2: LITERATURE REVIEW

2.1 Introduction to literature review

This study will explore the functions and design aspects of the Caregiver Wellness Centre through the concept of *Architecture as part of the restorative and therapy process* to assist in healing and uplift the lives of informal Caregivers. While this concept may not be new to architecture, it is often neglected, underestimated or overlooked. With the swift advancements of technology, the progression of medicine, combined with architecture that is too focused on functionality and rationality, has resulted in inhumane “healing” environments we commonly encounter.¹² Therapeutic architecture has developed into a well-known concept that represents this study’s vision of well-designed architectural spaces that encourage healing and wellbeing.¹³

It should be emphasised again, that the concept does not propose that the architecture alone has the ability to heal, but rather, the skilful manipulation of spaces may provide a platform for other natural factors like sound, light, colour, privacy, views, and even smell and touch to promote a healing that benefits the physical and psychological healing of these Caregivers and their loved ones.¹⁴ Therapeutic architecture as a concept can assist in responding to the physical, psychological and social impact that caregiving has on the informal Caregiver that will be expanded on further in the next section. This will eventually follow through in the theory of Perception and the theory of Biophilia that will be discussed later, in order to develop a design that fosters healing.

¹² Horsburgh, C. R. Healing by design (1995) from Basson,(2014)

¹³ Grinde et al, Biophilia from Basson, (2014)

¹⁴ Grinde et al, Biophilia from Basson, (2014)

2.2 Conceptual Framework

The healing process is a way of recreating harmony in the human body. Sickness implies that a loss of natural balance and the need for restoration with the body's natural ability to heal and regenerate. Healing cannot be understood in isolation from other factors that function in the life of humans. These include the inner-self, the family, community, and environmental context within which human life grows. Healing relies mainly on rekindling successful relationships. Healing is not simply the process of curing or repairing, but a restoration of balance between all the various components. Good health can then be described as the presence of a balance while sickness being an imbalance in the body¹⁵.

Space should not be thought of as an inert container. Rather it should be understood better, to fully realize its potential in the healing experience. Alex Stark emphasizes to us: "It is possible to conceive and create structures that heal" (Stark, 2016). While the choice of materials, structural elements, and modern equipment are part of the healing endeavor, equal consideration should be granted to the land, nature and the surrounding community, in the planning. Working with these considerations in totality may result in a mindful co-creation of space which goes beyond usefulness, becoming more vibrant and alive, and thereby capable of contributing to the healing process¹⁶.

Furthermore, the healing in psychology, medical science and even in the spiritual sense involves a process whereby the patient receives an external physical antidote in order to help them heal. It is then up to the patient to take the inward step of acceptance and retrospection in order to progress the healing. However, if we ignore the qualities of physical context it could involuntarily slow the healing process¹⁷

¹⁵ Stark, (2016)

¹⁶ Stark, (2016)

¹⁷ Mafisa, (2011)

This section will set out to seek gaps in the literature surrounding the informal caregiving. The literature reviewed in this study will strongly highlight the needs and challenges of informal Caregivers and help motivate and promote the proposal for a Caregiver Wellness Centre that focuses holistically on the wellbeing of both the Caregiver and Care-recipient.

Lim & Zebrack, (2004) acknowledges that informal Caregivers need to deal with extensive co-ordination. This may include management of symptoms, disability, mobility, and dressing of wounds. As a result of these responsibilities, they end up overwhelmed, experiencing feelings of tiredness, isolation. This could be a consequence of a lack of support, skills training, vital information or even someone to listen to their feelings. In some instances, informal Caregivers who are employed report missing work, taking personal days, and quitting a job or prone to early retirement to provide the necessary care needed. The illness that is chronic also affects Caregiving family members who care for their loved ones. Lim & Zebrack, (2004) also highlight the importance of attending to the effects of chronic illness on family members. They suggest that the physical and emotional health of informal Caregivers that are related as a family has the potential to severely impact on the health, welfare, and recuperation of the Care-recipient. Informal Caregivers considered themselves too responsible and over protective and were thus partly responsible for the Care recipient's loss of independence, mobility. Ahmed, et al., (2015) state that more than one-third of caregivers suffer from poor health themselves. According to them, about 29% of female caregivers have passed up the opportunity of a job promotion, or further training to take care of a patient. Ahmed, et al., (2015) are of the opinion that respite and social support makes caregivers less stressed, more satisfied, and improves the ability to provide care for longer periods of time.

2.2.1 Needs of Informal Caregivers

According to Walker (2011), there is a scarcity of research examining the needs related to knowledge and information or availability of services available to informal Caregivers in sub-Saharan Africa. A study conducted in South Africa and Uganda to examine information and communication informal Caregivers

and those the Care-recipient found that poor provision of information or knowledge negatively impacted the patients' and informal Caregivers' ability to cope with the diagnosis and care for the Care-recipient (Walker, 2011).

Another comparative study in Scotland and Kenya looked at the requirements of patients with an incurable disease and their informal Caregivers, highlighted the importance of understanding needs and how they are met in diverse cultural contexts. However, the immense variance in geographic, social, and cultural issues limited the findings from being generalized and used to understand other communities (Walker, 2011). It would be quite interesting to understand the perception of the study sample in relation to caregiving and their own needs and how they perceive the importance of knowledge and health-related information.

2.2.2 Lack of Choice in Informal Caregiving Roles

Prospective informal Caregivers may feel obligated to become Caregivers due to a social obligation or financial pressure. As a result, not all informal Caregivers choose to be Caregivers. Informal Caregivers that are reluctant to provide care are less likely to improve their skills that assist with the patient or be effective caregivers. However, the extent to which one has the choice of being a Caregiver affects their emotional well-being is an aspect of caregiving that has not received enough attention.

The study by Winter, et al., (2010) found that individuals that did not have a choice in the caregiving role were at an increased risk of stress. This could expose them to unhealthy consequences. The study also established that informal Caregivers without a choice in the role were more than 3 times as likely to complain of stress than Caregivers who had a choice in caring. Informal Caregivers with no choice in caring were mostly found to be the primary Caregiver of their parents. Winter, et al., (2010) also argues that further investigation is needed to determine if interventions that target informal Caregivers without a choice in the caring role can reduce their levels of stress. The growth of the older adult population increased

occurrence of chronic diseases, higher rates of survival among disabled people, and exorbitant costs of professional care have forced a great number of individuals into stressful roles of providing care for chronically ill or disabled family members

2.2.3 Impact on Physical, Psychological health and Social Life.

Studies indicate that a substantial number of informal Caregiving individuals regarded their own health as poor or fair. These individuals have regularly been described as the “hidden patients”. Their poor health has been recognized as a major risk factor for challenges in the management of their duties, causing a negative impact on the Care recipient and the admission of the Care-recipient into a long term respite facility. More interesting, however, is that according to Pinquart & Sörensen, (2006), studies have shown that women involved in caregiving were found to have lower levels of good physical wellbeing than men involved in the same activities.

Furthermore, Pinquart & Sörensen, (2006) suggest that Caregiver burden and depression may lead to negative changes, an increased vulnerability of the individual to infection, upset health habits, such as healthy sleeping and eating patterns. These stressors negatively affect their physical wellbeing. (Pinquart & Sörensen, 2006) suggest that sharing a home with the Care-recipient may be associated with more stress as co-residing means they will have less time off from their care role. Co-residence has a greater impact on physical well-being than on mental wellbeing indicating that healthy habits, like getting enough sleep and healthy eating patterns, are severely compromised when living together (Pinquart & Sörensen, 2006). The physical health of informal Caregivers who lived with their parents was found to be worse than other Caregivers. Therefore, Winter, et al., (2010) advise that while more objective approaches are necessary for clarification of the health consequences on these individuals in a complete manner, interventions should target Caregivers' psychological wellbeing as well as the promote good physical wellbeing, by offering exercise initiatives, better nutritional advice, and offer preventive care visits.

Merkey, (2015) investigated the frequency of symptoms of anxiety and depression among these individuals and this study indicated that participants who provided care for a family member were at a higher risk of developing a psychological disorder. Therefore Merkey, (2015) associates the provision of care for a relative with psychological distress and a higher incidence of psychological disorders. However, other factors such as being younger, female and divorced were identified as increasing the chance of developing a psychological disorder.

While one study indicated that nearly half of the participants reported that their well-being was negatively affected by their role, others found that the most common negative emotions reported by these individuals were feelings of being psychologically, emotionally, and physically drained. An improved quality of life for these individuals was associated with informal Caregivers who were married to their Care-recipient, male and older. A study by Pinquart & Sörensen, (2007) found that there was a higher rate of depressive symptoms in older Caregiving individuals. On the contrary, a greater rate of anxiety was prevalent in younger informal Caregivers. These younger individuals are more likely to experience stress due to caregiving due to less availability of coping resources like money and time than for older informal Caregivers.

Caregivers have been found to report greater levels of depression and stress than those not involved in caregiving (Walker, 2011). A Japanese analysis of Caregivers found that an increase in hours spent on caregiving was significantly correlated with an increased the burden the experienced, which was found to relate to increased symptoms of depression. Higher perceived stress which led to poor health, self-esteem, and marital satisfaction. Thus, it could be said that informal Caregiving burden and depression are significantly impacted by their involvement, hours of care they provided, patient behavior problems, and Caregiver/Care/recipient symptoms (Walker, 2011). As family members and friends make the change in role to becoming the primary Caregiver, they will experience increased burden, stress, and depressive symptoms, which have been shown to negatively impact on their overall physical wellbeing.

Walker, (2011) points out that numerous studies have highlighted the impact that provision of care to a family member or friend can have on the informal Caregiver's overall physical wellbeing. They experience

a stress response that is a result of prolonged treatment as the disease the patient progresses. This prolonged response can negatively impact the informal Caregiver's immune system and overall wellbeing. One such hypothesis states that the emotional response these Caregivers experience triggers negative biological responses. At diagnosis, informal Caregiver stress levels increase causing a "fight or flight" response. While this response is beneficial for the individual in the short-term, it has been shown to be detrimental when experienced over a long period (Walker, 2011).

While it is not known whether informal caregiving activity directly causes illness (Walker, 2011), but however research indicates to us that informal caregiving activity may compromise the function of the immune system thus increasing susceptibility to diseases. This has serious implications for the planning of healthcare services that may become burdened by the increasing caregiver population. The literature also suggests that Caregivers who experienced greater burden and strain are at a greater danger of dying prematurely (Walker, 2011).

Literature cited by Villiers, et al., (2008) emphasizes that psychological impact is not limited to the patient, but also affects the spouse. As a result, it should be recommended that both the informal Caregiver and Care-recipient be included in the occupational therapy programs. Some informal Caregivers felt that their social and free time activities were constrained. According to Villiers, et al., (2008) among the few factors contribute to the perception of well-being for the aged include health, satisfactory life arrangements and social integration. This finding is similar to other literature where studies found that 65% of Caregivers felt that their social lives had suffered greatly. The main needs conveyed by informal Caregivers was that their quality of life would improve if were to receive emotional support, learn new strategies to ease caregiving tasks, and having free time or social time to spend with others (Villiers, et al., 2008).

2.2.4 Benefits of Respite Care

Respite care programs are generally designed to provide temporary or short-term support in caring for individuals of varying ages who may even have special needs from families who have developmentally disabled or chronically ill family members who are usually cared for by a family member or friend at home. It is primarily intended to allow the informal Caregiver, who in many cases is the parent, to take some time away from the child, or in some cases, the child some time away from the parent, to allow them to emotionally recharge and become better prepared to handle the ordinary day-to-day challenges of caregiving in the face of a chronic life-threatening sickness. Respite care can be provided for a few hours a day, for two or three weeks overnight, or for an evening out for reasons of a family emergency, a special event (e.g. a family wedding), or for a break. Children and adults of all ages and with a variety of disabilities or illness are provided respite care services (Upshur, 1983).

Respite care could be provided in a host of different locations and offered in many different applications. During the course of a family member's illness, an informal Caregiver will need some time away from the duty of care giving. Some evidence suggests that Respite care reduces Caregiver burden and their symptoms of depression and increased well-being (Stirling, et al., 2014). Informal Caregivers receive a short break, feel less hostile to the Care recipient and reduce the use of coping strategies that may harm them. However, the evidence about the benefits for the Care-recipients seems less clear. An exploratory case study has supported recent work by others suggesting that Caregivers need be more confident that Respite Care provides benefits to Care-recipients when they take up a 'respite break (Stirling, et al., 2014). Concerns which includes social interaction along with significant and enjoyable activities for Care-recipients are critical issues for individuals who use a Respite Care service.

Researchers Mannan, et al., (2011) found that Caregiving Parents had positive regard towards respite with varying perspectives. Some view it as enhancing family functioning, while others regard it as essential for their survival. Parents also mentioned that respite care was required if they required a holiday

or in order to spend better quality time with their spouse and other children. Allowing the rest of the family to take a short break or holiday results in enhanced family function. For those who did not go on holiday, utilizing of respite care for the care recipient played an integral role in the creation of a totally different environment for other children in the family at home while the Care-recipient was away.

There is either a general lack of awareness or a lack of choice in relation to respite care especially in South Africa. An additional Respite Facility in the form of a Caregiver Wellness Centre will add one more significant respite option for informal Caregivers residing in Durban, thereby improving their choices. There is potential for a Caregiver Wellness Centre that helps heal or reduce the impact of caregiving on informal caregivers to help reduce the burden on other existing health facilities by freeing up space, thereby benefiting not just the Muslim, but rather the broader population. It is not unusual that respite services mostly focus on caring for care recipient/primary patient, indirectly helping the Caregiver. However, this typology will seek to address the issues of the informal Caregiver, help restore their wellbeing and health while allowing the patient to be nearby.

An environment that is familiar to the user, comfortable, and fulfills the spiritual/religious requirements especially of the females Muslim Volunteers who are usually hesitant to help, will increase volunteer-ship, patronage or social support and in turn, improve awareness of this important yet hidden role informal Caregivers play in the community. It is recommended from Khan (2001), that greater opportunities should be provided to make stronger, women's participation in community-based or welfare organizations. As a result, the author argues that women will be better equipped to work towards the eradication of the many social challenges faced by the community. In that light, it could be said that through a Community-based Caregiver Wellness Centre, designing around the needs of Women in the community was important, as being younger or female were amongst the factors mentioned earlier that increased the risk of developing a disorder. Thus a well-designed facility will make the environment easier for female volunteers to assist and will also be beneficial to their own well-being, thereby improving the service or care of the Care-

recipients. The facility will also give the managing organization a platform to work from, improving coordination, care, and events and also improve awareness or acknowledgment of informal caregiving.

Among other reported benefits from the literature attributed to these breaks are the prevention of long-term placement in an institution¹⁸ and improving the informal Caregivers' social support and general satisfaction in life¹⁹. Another study reported that using respite care was beneficial to Caregiving parents in the following ways: better mental wellbeing and peace of mind; improved family functioning; and support (Canavan & Merriman, 2007). The benefits of respite care to the family of a developmentally disabled care recipient cannot be underestimated. While the literature does acknowledge the strength of this informal Caregiver and Care-Recipient partnership. It is disappointing that the provision of respite is merely framed or categorized as a mere 'rest for caregivers' (Stirling, et al., 2014).

2.2.5 Creating enthusiasm in using a Respite Facility

The utilization of respite services by family members requires a multi-faceted decision-making process. They are often torn between desire and the need for a refreshing break for themselves, concerns about the quality of respite care environment that their child, and having to consider their own needs and emotions, and how this will affect the Care-Recipient and other family members. Parents expressed feelings that they were not given enough support in resolving the dilemmas they faced which, in turn, affected the attitude to respite breaks.

Furthermore, a major concern discussed by researchers Mannan, et al., (2011) was that family's undecided feelings about using Respite Care as it could create a dilemma for parents who are unwilling to involve people outside the family in caring for their child. Letting go of the Care-recipient maybe a

¹⁸ Heller & Caldwell, (2005)

¹⁹ Chou et al, (2008).

challenge. Their findings are also consistent with other studies that indicated respite care allowed them to calm down psychologically while on the other hand, using respite care also created a sense of guilt. Caregiving parents felt that they lacked support from others especially when respite options were limited. Support from others would help them overcome their sense of guilt. Mannan, et al., (2011) also found that parents who used respite care indicated a mixed sense of guilt and relief. Others passionately expressed that they would benefit from better support in considering the use of respite care. However, they also noted that parents also indicated that as time passed, the feeling of guilt gradually disappeared as the benefits from such breaks became more apparent.

Documented respite care studies²⁰ also indicated that caregiving mothers improving social activity through the use of respite. Therefore, in response to the above concerns, it is imperative that the respite design proposal house both informal Caregiver and Care-recipient within the same facility rather than separating them during the respite period or Caregiver retreat, and including facilities and activities that improve their social support and knowledge so that the issues of total separation does not create reluctance or guilt in using the facility.

²⁰ Hartrey & Wells (2003)

2.2.6 Importance of Interventions for Informal Caregivers

While a variety of approaches to providing Respite Care have developed, each with its particular advantages and disadvantages, respite options in Durban remain limited mostly to informal methods of respite. A combination of approaches to providing respite care will have the best chance of meeting the variety of family needs that will be present. The availability of both emergency and planned respite care are necessary for the delivery of comprehensive services.

The study of Mannan, et al., (2011) concluded that the provision of respite has the had great potential. The findings suggest a great needed for enhancing the coordination between family members and professionals in order to support one each other to improve the redesign of existing respite facilities, and the extension of these services to the growing number of informal Caregivers that require respite.

The author Merkey, (2015) is of the opinion that while the current study provides evidence that informal Caregivers do so at a great risk to their own psychological wellbeing, performing this honorable service not only to their family but also to broader society as a whole. Caring for someone demands a huge amount of energy, time, and finance over long periods of time and the consuming nature of the role can be extremely stressful and exhausting. Even from an economic perspective, these individuals save healthcare services billions in hospital costs (should their role and importance not then be acknowledged and celebrated?). Therefore, implementation of informal Caregiver interventions and investment in such facilities is justifiable and extremely important, especially those that are designed to focus on specific groups, like women as they are at greater risk of encountering a psychological problem.

While Informal Caregivers are vital resources, not just to their families but also to their communities and country, caregiving can be extremely problematic. To ensure the provision of good quality long-term care to the elderly, informal Caregivers need to be well supported (Wens, et al., 2012). Wens, et al., (2012) also concluded that an

Integrated support strategy that is tailored to the individual Caregivers' physical, and social needs should be preferred when supporting informal Caregivers, also arguing that an intense collaboration and coordination between all responsible parties involved is required. They also suggest that respite care and other Interventions aimed at the individual Caregivers' level can be beneficial in reducing depression, burden, stress, anger and role strain. Furthermore, Wens, et al., (2012) added that group support has a positive effect on Caregivers' coping ability, knowledge, social support and reducing depression.

Although support groups and friends offer assistance to some extent, the role of the family remains the primary support, is confirmed in the literature (Villiers, et al., 2008). However, the importance of external help is also mentioned in studies, especially where changes to an individual's role take place and the informal Caregiver then becomes the breadwinner as well as the housekeeper. We learn from Villiers, et al., (2008) that one-third of these informal Caregivers were of the opinion that they received no assistance from others. This is attributed to the public's ignorance or misconceptions about disease or underestimation of the negative impact or burden of the disease on the informal Caregiver. Villiers, et al., (2008) also emphasize the necessity public awareness, which in their opinion demands more attention from support groups and healthcare staff. The ideal improvement should result in the greater public awareness that works together with an increase in support from healthcare staff.



SUMMARISING AN INFORMAL CAREGIVING INTERVENTION

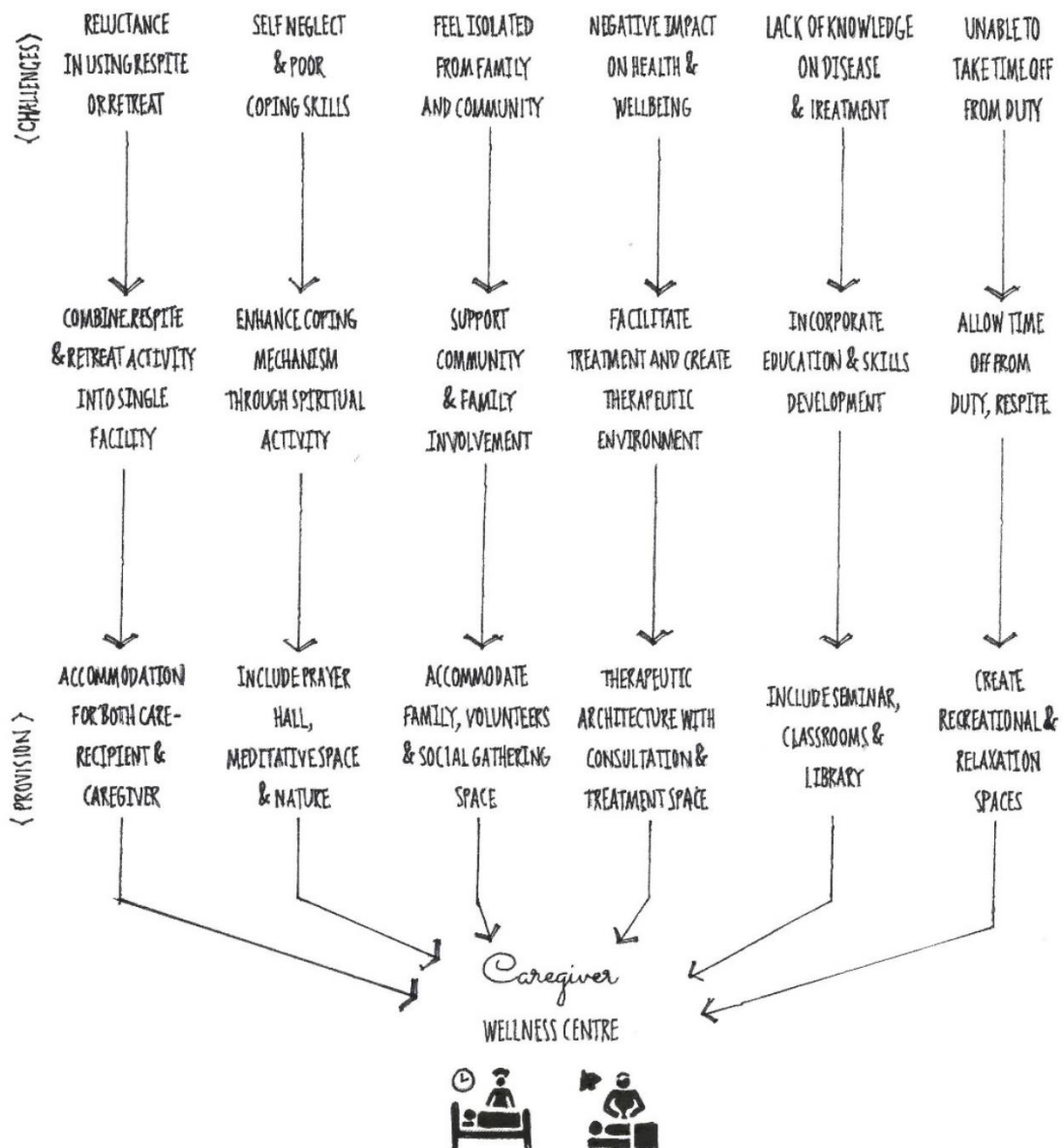


Figure 8 Diagram summarizing an intervention for informal Caregivers. Source: Author (2016)

2.3 THEORETICAL FRAMEWORK

2.3.1 The Theory of Biophilia

Biophilia is a genetically determined characteristic of attraction or affinity of humans with the world of nature (Foote, 2015). The Biophilia Hypothesis was put forward by a biologist, Edward O. Wilson (1984) who suggested that human beings require a connection or interaction with living structures in our environment²¹ This, according to Wilson, was not simply a fondness nor an acquired aesthetic preference, but a basic need that could be equated to our need for air, water, and food. To confirm the importance of the biophilic effect with each step humans take to shape their environment, a survey of what people preferred to keep in their home environment included greenery in the immediate outdoors, indoor plants, pets, and contact with other people. (Salingaros, 2015).

Humans have always maintained a strong connection to the natural world. Early human beings lived in conjunction with natural cycles and depended on nature for food and shelter. Interestingly, present day human beings spend a great deal of their free time and income recreating the outside as a way to escape the stressfulness of daily lives. When people are visiting loved ones who are ill or, on the other hand, are celebrating something meaningful, a bouquet of flowers is often brought as a token of support. This example points to one hypothesis that aims to explain this connection.²² With the advancement of cognitive neuroscience, behavioral studies, biology and the environmental sciences, the gap between biological and social sciences are being bridged and our understanding of the human species are improving²³ The *Biophilia hypothesis* is a valuable theoretical approach to push the exploration of human's connection with nature further in the proposed Wellness facility. Thus, the translation of this

²¹ Kellert *et al.*, (2008) from Salingaros, (2015)

²² Wilson, (1984)

²³ Wilson, (2008) from Davidson, (2013)

hypothesis into a design theory referred to as biophilic design will be explored for the purposes of learning how it is applied to the built environment. This will be used as a primary theory in this study through an author in the field and harsh critic of the architectural profession - Nikos A. Salingaros. According to Salingaros, the science supporting biophilic design is 'still emerging'. he argues that in many ways, the research is 'really just corroborating the rediscovery of the intuitively obvious.' ²⁴

2.3.1.1 Biophilic Architecture

Biophilic architecture is about, preserving, harnessing or showing love towards nature and working with it in the built environment²⁵. As an architectural approach, it tries to reconnect the dislocation that exists between the world of nature and modern human beings. It is an attempt to fill the gap resulting from an ever-increasing urban lifestyle.²⁶ It is common for those who do not work or live in environments with sufficient windows or views will beautify their space with pot plants or fish tanks to liven up interior space. The valued space in a high-rise building, the corner office or apartment are usually those with views out onto a landscape below. While these particular factors are less important for our survival in today's advanced world, the fact that they remain our preferences reinforces the theory of Biophilia.

There is a revival of interest in creating spaces and places that support health and wellbeing in the way we approach the design thinking for why we build buildings. The best biophilic design would be a design that effectively eliminates stress and anxiety from the built environment. This could be achieved by maintaining thoughtful connections with nature.

²⁴ Browning, et al., (2014)

²⁵ Hassel, (2015).

²⁶ Davary, (2012)

2.3.1.2 Biophilia in Modern Architecture

Salingaros, (2015) severely criticizes architects for not unlocking the potential healing effect when he states: that Architects have purposely steered design away from a potential healing effect. According to him, well-known architects are not open about this approach. On the contrary, the average Architect is hardly aware of the benefits of such approach. Most Architects, according to him, merely do their jobs as they had learned in architecture school. Contrary to what architects are taught, our visceral reaction is instinctive and automatic. We merely override this reaction to superimpose an acquired artistic preference on the part of our thinking. This, however, does not alter the human being's natural bodily signals. An unacknowledged ban, according to him, has been in effect for a long time until now, severely limiting the architect's options to using the only industrially suitable material. As a result, anything that has any resemblance to a biological structure is shunned. Even with acceptance of organic shapes in architecture lately, in his opinion, the selection of materials and surfaces continue to lack the well-organized complexity that can be found in nature. The Author equates these actions to Biophobia: a hatred of biological existence, thus there is a compulsion to use a minimalist aesthetic of industrial materials in constructing the built environment.

Architects, according to Salingaros, (2015) avoid working with the forms and surfaces that can activate human emotion because they are not adequately skilled on how to control them. out. They opt for an easy way, trying to avoid the complexity of design that gives rise to intuitive feelings; they try to "clean up" their design through self-imposed minimalism. The complexity of a biophilic design must, therefore, be extremely potent to engage the user viscerally. This challenge, according to him, distresses the average architects, who prefer simplicity to ensure control over the design process and proposal.

“The radical shift to implement minimalist environments was not a scientific but an ideological decision. Modern science and technology are capable of providing us, instead, with wonderfully adaptive healing environments. We can do so more easily today than at any time in human history.” – Salingaros (2015)

The shift to implementing a minimalist approach to architecture was not scientifically backed but simply an ideological decision (Salingaros, 2015). He is, however, confident that architecture that is healing can be developed. “Modern science and technology are capable of providing us, instead, with wonderfully adaptive healing environments. We can do much more, easily today than at any time in history.” Architecture as a profession is still attached to intellectualized approaches to design in which the instinctive experience plays no role. It continues to embrace the ‘machine aesthetic’, rejecting the natural intuition possessed by human beings that link their emotions with the surrounding environments to encourage efficiency and reduce costs. The ‘feedback loop’ with nature possessed by humans was disconnected and the healing effect of organized complexity has been largely overlooked. This mistake comes at the expense of isolating us as human beings from our very own natural emotional support systems.



Figure 9 A minimalist house with blank walls that embraces a machine aesthetic. Source: <http://www.realtor.com/images/NEWS/Design/Dwell/2016> (accessed: July 2016)

Finally, Salingaros, (2015) also puts blame on decision-makers who pay for the architecture today insist on fancy roofs and colliding planes for the biophobia²⁷. They commission architects with an excellent track record of sculptural form making or imagery as it will be profitable and gain media publicity. The delight factor of contemporary iconic buildings today, in his opinion, has immense bio-phobic consequences. If the trend continues unchallenged, the built environment growing increasingly unhealthy and ultimately turn out to be unfit for human life.

2.3.1.3 Biophilia in healing environments

Evidence from both scientific and from traditional sources are giving rise to a healthier environment. The science of psycho-neuro-immunology is contributing more knowledge about how the human nervous system affects the immune system, hence the ability for humans to heal. Human emotions have great control over of how the disease is warded off²⁸. With auto-immune and stress-induced diseases, the importance of environmental factors increases significantly. As a result, older, traditional healing practices

²⁷ Fear, dislike or avoidance of nature.

²⁸ Salingaros, (2015)

using the environment is now gaining greater attention in today's mainstream healthcare sectors²⁹. *Christopher Alexander, the Author of Pattern Language states that human beings require constant contact with plants, trees, and water. Human beings are able to feel complete in the presence of nature and are able to attract sustaining energy from natural life.*³⁰

Biophilia works by re-establish humans contact with their surroundings, applying the geometry found in nature to improve mental and physical nourishment they require. The basic aim is to lower the stress imposed on the human body, helping its natural defense system to fight illness and to promote natural healing. Historically, medicine took the role of the environment seriously as a factor in health and healing. However, this approach was neglected after the industrialized nations of the world advanced technologically. The formal healthcare sector began to focus narrowly on a direct intervention approach such as drugs and surgery but has now seen its limitations (Salingaros, 2015).

Salingaros (2015) is of the opinion that an environment that heals, develops when human beings draw from the complexity of nature and consider themselves in touch with their emotions. According to him, people are increasingly demanding healthier environments that are effective in lowering stress. Design tools to help achieve this goal can only be found by looking beyond the mainstream architectural approach. The foundation for these tools has been laid down by architectural theorist Christopher Alexander and his colleagues³¹.

2.3.1.4 Relevance of Biophilia in Islamic Healthcare Facilities

Many sectors of society are increasingly embracing biophilic design, from healthcare facilities to offices, hospitality venues, and community centers. For each sector there is often a different justification — be it

²⁹ Salingaros, (2015)

³⁰ Pattern 173 "Garden Wall" Alexander et al., (1977) from Salingaros, (2015)

³¹ Alexander, (2001-2005); Mehaffy & Salingaros (2015) from Salingaros (2015)

for better public health, higher productivity and sales improved academic results. The biophilic design has been a uniting theoretical approach for meeting these different end results³².

This connection to nature can be found throughout the world and for many, nature is a part of their religion. Historically, in the Abrahamic faiths, Judaism, Christianity, and Islam, the garden was a symbol of paradise, suggesting that it was this environment that people would go to achieve ultimate spiritual, emotional and physical reward³³. Quite importantly, according to Davary (2012), the biophilic design was a traditional architectural approach in various Islamic cultures. It was only until the early 20th century after colonization that these traditional approaches were unfortunately replaced with modern approaches that showed disregard for nature in many places.³⁴ Islamic architectural approach is about being in harmony with nature, thus any approach that defies nature cannot be Islamic³⁵. Therefore, through the use this theory, it would be most appropriate then to emphasize the connection of contemporary Islamic architecture of the Caregiver Wellness Centre to nature. It could then also be argued that the feeling of spirituality within the design could be fostered, through the implementation of the Biophilic architecture. The strengthening of the spirituality would mean the strengthening of the user's coping mechanism, with would be beneficial in helping them overcome challenges and heal faster.

There has been documented evidence from as early as the Middle Ages suggesting the correlation between gardens and formal health care.³⁶ Early healthcare facilities were most often in monastic communities where medicinal herbs, sensory gardens, and prayer were used for healing purposes. These were known as 'cloistered gardens', areas that were an essential part of the healthcare landscape³⁷. As a part of their therapy, patients were brought outside to be exposed to fresh air and sunlight. This approach to treatment was used up until the late 1800's where European hospitals still had a tendency

³² Catherine O. Ryan (2015) from Salingaros, (2015)

³³ Davidson, (2013)

³⁴ Davary, (2012)

³⁵ Akhtar, (2010)

³⁶ Ulrich, (2002); Warner, (1995) from Davidson, (2013)

³⁷ Cooper Marcus & Barnes, (1999) from Davidson, (2013)

to provide private gardens in which patients could sit and be exposed to nature to help the body's healing process³⁸.

Over the centuries, however, this strong link between healing and nature was gradually replaced with contemporary medical technology, as it advanced and became more specialized. There was more awareness of infection and the need for sanitary conditions. New and improved treatments that focused less on the physical and more on the medical aspects were given attention and the holistic approach to medicine was thrown aside. Architects also overlooked the complex human response to the built environment in their eagerness for the hypothetical mechanical efficiencies of the industrial approach to place-making.³⁹ Hospitals then progressed into what we could describe as cold, sterile intuitions that dominate the health care industry today. However, since the 1990's there has been a reawakening in nature-base care and professionals are once again beginning to focus on the whole person, the mind, body, and spiritual connection, in health care⁴⁰. It is for this reason, that the use of the biophilic approach to a Caregiver Wellness Facility would be highly beneficial to their wellbeing.

2.3.1.5 Biophilic strategies

From Salingaros (2015), we can learn that building could appear to be biophilic when viewed from a distance but not when viewed close up, or vice versa. A building could show no visible biophilic elements in its appearance; yet steal biophilic qualities from the natural context surrounding it. This can be portrayed by the Farnsworth House (shown in Figure 11) designed by Ludwig Mies van der Rohe. On the contrary, a building may be biophilic in detail but on a larger scale of the buildings not be biophilic or be severely unnatural in their geometry. This could be said about the German Pavilion which was built in

³⁸ White, (2011) from Davidson, (2013)

³⁹ Salingaros, (2015)

⁴⁰ Cooper Marcus & Barnes, (1999) from Davidson, (2013)

1929, which also utilized marble, travertine, and red onyx materials with is shown in Figure 10. The use of pools of water then soften the stark unnatural exteriors which could be considered a biophilic gesture.⁴¹



Figure 11 The Farnsworth House designed to maximize views of the natural surroundings. Source: <http://farnsworthhouse.org/> (accessed: August 2016)



Figure 10 The Barcelona Pavilion showing the wall finish that could be considered a biophilic gesture on a small scale. Source: <http://miesbcn.com/the-pavilion/> (accessed: August 2016)

Smaller scales represent ornaments and elements of which the ornament is composed. Ornament arises more naturally from bottom up, but using a rich form language can ensure that coherence is achieved from the top down as well (Salingaros, 2006). This consistency is not possible to attain with a top-down approach especially when it employs smooth surfaces without adornment, glass curtain walls, and sharp-

⁴¹ Kellert *et al.*, (2008) from Salingaros, (2015)

edged frameless windows or doors. The Author is not against top-down design approach but rather, he is opposed to a stylistic approach that tends to omit the small scale considerations. A Top-down approach fails when it omits small scale details. All in all, human comfort or wellbeing, according to Salingaros (2006), relies on a smaller scale, allow the mind to register the absence or presence of a scaling hierarchy in architecture.

2.3.1.6 Factors that Trigger Healing Through Biophilia

The major contributing factors to the biophilic effect on human beings can be summarized as follows: Light, Colour, Gravity, Fractals, Curves, Details, Water and Life. These factors will be discussed in more detail. These descriptions will demonstrate the application of the biophilic effect to ensure we design healthier buildings. Biophilia reflects natural instinctive response in humans to the built environment. To achieve a healing effect, the following guidelines must be applied f and not just reduce the design to another mimicry of organic form. The following eight points, mentions by (Salingaros, 2015), can be an excellent design biophilic checklist, which considers the human wellbeing related aspects of architecture:

2.3.1.6.1 Light:

Human beings need natural light, from multiple angles so that shadows do not diminish their vision, necessary to form three-dimensional imagery and depth perception. Natural light is crucial to observe and gauge the surroundings, the skin needs sunlight in order to make vitamin D, which is crucial to the daily metabolic functions. The eyes and skin require sunlight to function. The internal body clocks are regulated by the effect of sunlight on the eye and skin. This controls the sleep cycle. Furthermore, when the human body circadian rhythms are disturbed, it becomes chronically fatigued and normal function is affected. Sufficient amount of sunlight is needed in order to restore the body (Salingaros, 2015).



Figure 12 A Mosque prayer hall designed to allow morning light in. Source: <http://uraiqat.blogspot.co.za/2012/05/al-rawda-mosque.html> (accessed: August 2016)

2.3.1.6.2 Colour

Colour in partial amount with overall harmony generates a positive effect on human health. Colour perception is one of the human senses that is linked directly to emotion. Human beings experience color

in the transmitted quality of light and the reflection from colored surfaces. The psychological effects of color are well known, utilized extensively by the media and advertising. Interior designers too, carefully consider the use of colors enhances people's psychological mood. For example, the brain associated the color gray or colorless surroundings with illness and death (Salingaros, 2015).



Figure 13 The colorful interior of The Pink Mosque, Shiraz.

Source: http://www.dailymail.co.uk/travel/travel_news/article-2834359 (accessed: October 2016)

2.3.1.6.3 Gravity:

Human beings relate to balance through gravity. Plants and animals grow in gravity; thus their forms show a delicate vertical balance. The heavier parts of natural structures are naturally found lower and the lighter parts are higher. The human brain automatically acknowledges this gravitational balance of forms that surround it. Objects that exist naturally in the surrounding are considered to be in “gravitational equilibrium”. This informs our mental fondness for steady structures. Tectonic stability can be noticed on the Woolworths Building in New York (see Figure 14).

In traditional architecture, the use of forced perspectives where scale is deliberately condensed as the gaze rises and theater stages designed to amplify the visual perspective comforts the human body and reassures gravitational balance. This can also be attributed to stress reduction. However, the gravitational imbalance could have the opposite effect, causing anxiety to the body. This could be the case with CCTV building (See Figure 15) (Salingaros, 2015).



Figure 14 The Woolworth Building, New York City with a balanced form that shows tectonic stability by stepping back as the building rises from the ground. Source: <http://www.boomsbeat.com/articles/2160/20140415/a-must-see-when-in-new-york-city-the-woolworth-building-photos.htm> (accessed: October 2016)



Figure 15 The CCTV building, Beijing, designed by Rem Koolhaas with a colossal cantilevered form engenders anxiety in the human body. Source: Francisco Anzola (2011) from <https://www.flickr.com/photos/fran001/6233587191> (accessed: October 2016)

2.3.1.6.4 Fractals

A fractal conveys geometrical order on many different levels and has no preferred scale. This could be pointed out in many examples of plants like ferns. A fractal contains well-defined subdivisions of structure in a well-ordered hierarchy of scales, from a large scale down to its smallest details. Various scales are displayed in a fractal, with their complex structure showing at any levels. Living organic tissue in the human body are fractals — for example, the nervous system and the lung's system of branching air

passages. Human beings recognize this and respond positively to fractal structures because the human body itself has this in common with other animals and plants. This similarity links us to structures in the environment that follow the same geometrical order, such as plants, trees, or animals. On the contrary, humans react poorly to structures that do not display fractal structures. Buildings with smooth, polished or glossy objects in the environment create discomfort that occurs mainly because their contradictory nature humans are used to experiencing in nature (Salingaros, 2012)

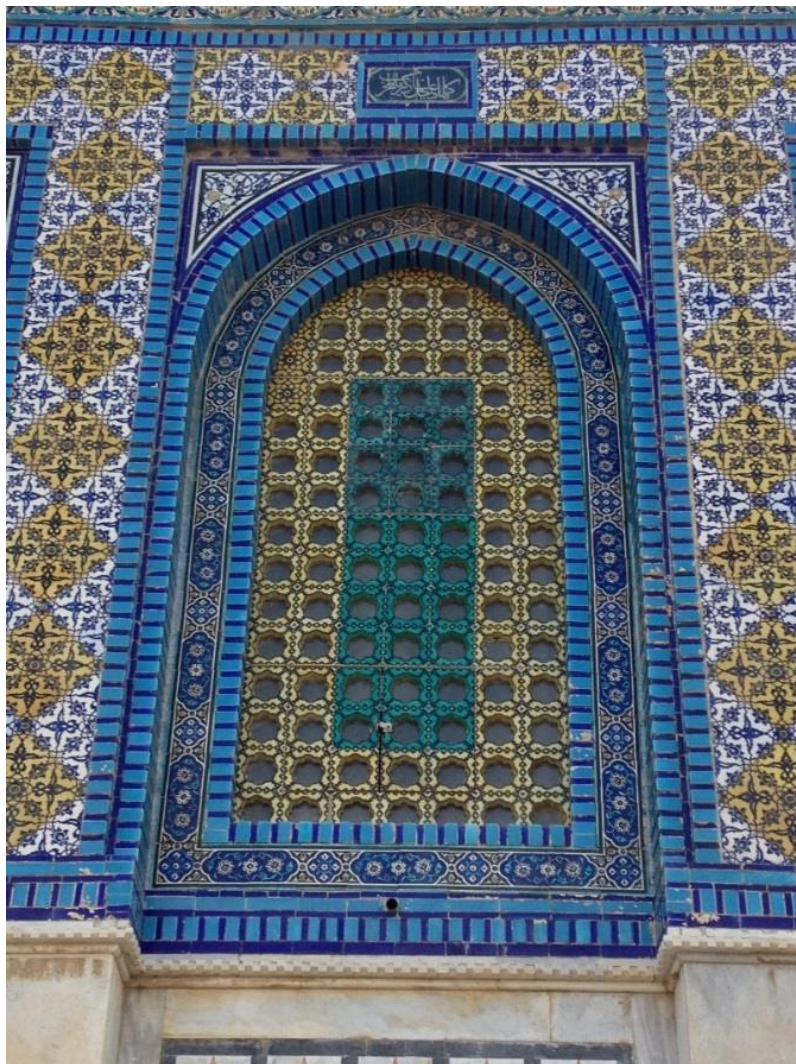


Figure 16 A fractal pattern adorning the Dome of the rock Mosque facades, Al-Aqsa. Source: Author (2015)

2.3.1.6.5 Curves

Curved forms, as opposed to straight lines, in nature are found in abundance. These curves manifest from the natural structure of animals, vegetation and from natural inanimate objects of natural matter that was shaped by tectonic forces. According to Saligaros (2015), smooth curves are mathematically at odds with of angled fractal that may be found in trees and in the naturally weathered patterns of natural materials. The natural environment displays either fractal, curved forms, or a combination, not straight lines or right angles. The human neurological response mechanisms are programmed; thus the human body gains emotional pleasure from curves that possess a natural balance through symmetry. Curves in the environment that are gravitationally unbalanced, however, can be unsettling to the human body (Salingaros, 2015).



Figure 17 The use of curves in the form of Arches in a gravitationally balanced way in Ancient Islamic architecture seen at the Qibli Mosque, Al-Aqsa. Source: Author (2015)

2.3.1.6.6 Detail

According to Salingaros (2015), on an intimate scale, highly organized complex detail is evident throughout nature. The human sense of touch requires that the body be close to a surface or structure in order to gather information from the detailed environment. The body will focus on the smallest detail, defined natural structures that are sharp and textures and patterns in stone, natural wood grain, and leaves in trees. The human body has an expectation of finding the same complex structural detail in the built environment since the human perceptual mechanisms are tuned to process such signals. The human body feels isolated from its natural mechanism when it experiences architectural styles where detail is absent or detail that is chaotic or lacks order (Salingaros, 2015).



Figure 18 An interior of the Qibli Mosque, Al-Aqsa with an abundance of decorative detail. Source: Author (2015)

2.3.1.6.7 Water

The presence of a body of water has the potential to heal. Human beings love to see, touch and feel and hear water. This need to be close to water could be a reassurance that we have enough water to drink, ensuring our survival (Salingaros, 2015). The presence of water in design for pleasurable spaces can be evident in the al-Hambra complex courtyards in the form of water lanes, fountains, and reflective pools as shown in Figure 19 and Figure 20. The Palacio del Generalife was a summer palace of the Moorish Kings, which was completed in 1319, during the reign of Ismail I. This palace is most well-known for its lush gardens as shown in Figure 20. The beautifully landscaped grounds extend up the hill, with terraces, hollows, flower beds, and neatly trimmed hedges. The most prominent feature of the gardens is the use of water in water lanes and decorative fountains are comforting to the human body. Furthermore, the abundance of water in the design was the Moors' symbol of richness, and the fountains were also an extravagant showpiece⁴².



Figure 19 The Court of Myrtles in the Al-Hambra complex in Granada, Spain, with hedges of myrtle around the central pond. Source: <http://www.planetware.com/granada/alhambra-hill-e-and-ah.htm> (accessed: September 2016)

⁴² Lisa Alexandra (2016) source: <http://www.planetware.com/granada/alhambra-hill-e-and-ah.htm>



Figure 20 The use of water in water lanes and decorative fountains within the Alhambra Complex courtyard. Source: <http://www.planetware.com/granada/alhambra-hill-e-and-ah.htm> (accessed: September 2016)

2.3.1.6.8 Life

Intimate and realistic contact with other living creatures, according to Salingaros (2015) nourishes the human beings. This is the most obvious meaning of biophilia. The human body desires a relationship with plants, animals, and other human beings. This should serve to encourage architects to create more opportunity to interact with the natural world not merely for decoration. Enclosing a courtyard garden, or surrounding a building with intimately interwoven trees and shrubs, for example, provides instant and direct access to the natural world. The biophilic effect is enhanced by such simple gestures such as incorporating a pot plant within an internal space (Salingaros, 2015).



Figure 21 A strong biophilic gesture in the design of the Khoo Teck Puat Hospital, Singapore. Source: <http://www.designcurial.com/news/biophilic-design-and-architecture---10-of-the-best-biophilic-buildings-4527750/8> (accessed: August 2016)

2.4 Conclusions from the literature

Individuals and families who utilized Respite Care were generally pleased with respite care environments and described it as “*home away from home*” where the care recipient was safe and secure (Mannan, et al., 2011). Emphasis is laid on the suggestion that a respite care environment must strive to relate to the user and be such that it gives them encouragement to return to the facility and continue taking benefit from such an option. Sending children for respite care in adult settings was identified as inappropriate by parents (Mannan, et al., 2011). The stress for caregiving parents needs to be largely considered with various inter-related approaches, of which planned respite breaks is just a part of. However, respite breaks are usually offered as a ‘stand-alone’ service, unrelated to other support functions that could improve the wellbeing of the informal Caregiver or caregiving families. The availability of a coordinated respite with a range of family services is a possible solution for overcoming this caregiving problem.

The family members confirmed that a leading concern is an environment which respite is offered. A homely setting was preferred that serves a small number of persons in a facility that was specifically for short term breaks. The findings of the study (Mannan, et al., 2011) suggest that respite care is required to be built around the needs of Caregiving families. A partnership between families and professionals is essential, in order to support one another through the difficulties associated with the usage of respite care facilities. A shared understanding of the trauma for families in letting their loved one go, particularly where the respite options are not of high quality, should act as an agent for change. (Mannan, et al., 2011) calls for creative solutions as respite care, one that has potential to make a difference and ensure that it provides better options that people would desire to use and choose to be part of, as opposed to being fitted into an environment where the user needs were not considered.

Despite focusing on the provision of respite for caregiving families, there is a lack of studies on experiences of these services, and the decision-making entailed in the use of such facilities. Perceptions of potential users of Respite Care facilities should be explored further to reduce reluctance in using respite care facilities. Future studies could focus on the development of integrated models of respite care for individuals with disabilities, and on documenting outcomes for caregiving individuals and their families in utilizing these facilities. This cannot be done without sufficient availability and utilization of respite care facilities.

The research observing the emotional and physical impact of informal caregiving has been conducted mostly in developed nations. A lack of research exists in examining the experience of caregiving provision to a loved one in low and middle-income countries like South Africa. Sub-Saharan Africa, in particular, has a shortage of studies probing the effects of providing care for a patient. With the prevalence of cancer in Sub-Sahara Africa, family members' roles are even more vital as a resource for healthcare. Furthermore, the amount of suffering informal Caregiving individuals report as a result of providing care

differs by ethnicity and the cultural setting. Regrettably, evaluation of cultural differences in informal Caregiver distress has also been limited only to developed countries (Walker, 2011).

The informal Caregivers expressed that the inadequate information regarding details of the patient's condition increased the burden. For example, misunderstanding of the contagious nature of disease caused some informal Caregivers to be more hesitant in providing care. Information regarding disease treatment, medication, the progression of the disease, the lack of skills to treat the patient's symptoms and the lack of social support were of concern. Thus the need for including Caregiver training and health education within a respite care facility should be looked into. The study Walker (2011), highlighted the importance role of social support and the positive impact it can play on the emotional and physical health of the informal Caregiver. These individuals desire to receive support from family and friends, but they clearly understood that if they were not able to help, any type of support would be appreciated. Some of the burdens in the care process could alleviate and allow the Caregiver to share the responsibilities of providing care to others when social networks are involved.

Walker, (2011) highlighted the negative emotional impact that providing care may have on the informal Caregiver as well as the importance of the provision of services and as well as adequate information for family members and friends of the Care-recipient throughout the course of care. The findings support the need for the interventions that focus on improving the wellbeing of both informal Caregiver and Care-recipient throughout the care situation. Therefore, we can conclude that the findings from the various literature have significant implications that need to be considered which are especially important for practitioners who want to assist in the promotion of respite care. On the basis of the findings of Mannan, et al., (2011), one could ask the question: Given the various findings in the literature on the tough challenges facing Caregivers, their reluctance to use respite care, and our vital role as architects, what can we do to enhance the design of respite care environments for both caregiver and care recipients and the broader community? Hence, this study will look to Muslim women informal Caregivers for more

recommendations that could shape the environment of a respite care facility through a cultural lens within the South African settings.

Through the literature, it was noted that Biophilic design is not just about greening our buildings or simply increasing their aesthetic appeal through inserting trees and shrubs. It is a much deeper approach to design. It is an issue of humanity's place in nature, and nature's place in human society⁴³. The literature also confirms that architecture could play a role in healing and have a restorative effect on humans. Thus, the biophilic design approach will only be beneficial if implemented through a bottom-up process as explained by (Salingaros, 2015). We also note the need for the Biophilic approach is increasing: in the coming decades, it is projected that 70 percent of the global population will dwell in urban environments. With this shift in population, the need for designs to re-connect people to an experience of nature becomes increasingly important. Biophilic design is not a luxury, it is a necessity for our health and well-being. While empirical evidence is still being gathered, we ought to go about restoring the human-nature connection in the built environment⁴⁴. Thus, we are urged through the literature to bring biophilic design into our architectural vision for a healthier Wellness facility.

⁴³ Kellert et al., (2008) from Salingaros, (2015)

⁴⁴ Browning, et al., (2014)

3 CHAPTER 3: PRECEDENT STUDIES

3.1 INTRODUCTION TO PRECEDENTS STUDIES

The precedent studies selected in this study emphasize the point that architecture can successfully act as a therapeutic tool that operates therapeutically. Each precedent demonstrates how the built environments affect us and how architecture has the ability to mold and shape the perceptions of its users. While the phenomenological approach to architecture is what constitutes architecture as an art, the precedent studies selected in this study also suggest to us that architecture is not merely an artistic expression of an architect or only for the appeasement of the human eye but rather it is about the human existential experience of space. The sensory and intimate connection, human beings have with architecture on a daily basis is the art of architecture. This interaction we have with architecture on a daily basis that frames our daily activities and experience of spatial environments

The buildings, referred to in Figure 22, relate to architecture as part of the therapy, connection to nature and historical health-related environments, and will thus be discussed in this chapter:

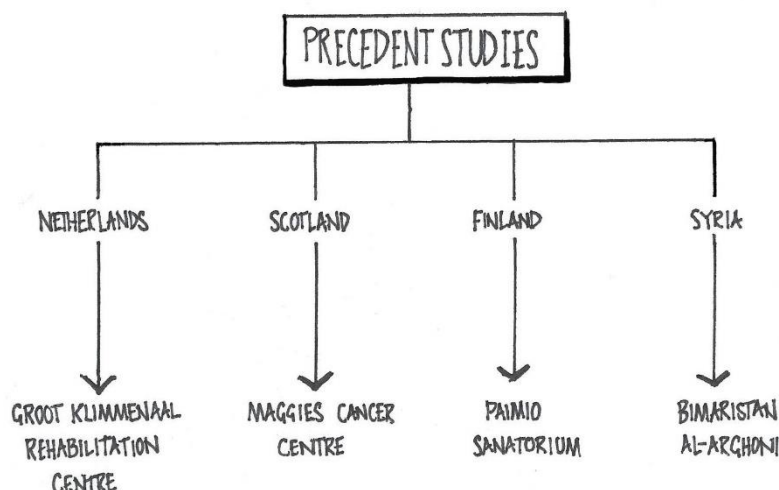


Figure 22 Diagram outline of Precedent Studies. Source: Author (2016)

3.2 GROOT KLIMMENDAAL REHABILITATION CENTRE

3.2.1 Background

This Rehabilitation and Revalidation Centre, designed by Koen van Velsen, is discreetly located in a leafy forest shown in Figure 23, near Arnhem in the Netherlands. This three storey structure was designed through a collaboration between the Architect and the intended users of the building which encompasses a variety of facilities such as a swimming pool, gymnasium, restaurant and a performance theater.



Figure 23 The Groot klimmendaal Rehabilitation Centre. Picture by Robt Hart Source: www.dailytonic.com/rehabilitation-centre-groot-klimmendaal-by-koen-van-velsen-architectenbureau-nl/ (accessed: July 2016)

3.2.2 The design

The design is part of a master plan that envisions the area, to be gradually transformed into a public park. The open environment offers a natural habitat for quality care and at the same time allows plenty of opportunity for other activities. The concept of care in this facility is based on the idea that a positive and stimulating environment improves the well-being of patients and has a beneficial effect on their recovery process. In relation to the biophilic approach, it could be said that the architect chose not to create a facility that offered biophilic qualities in its appearance but rather opted for a building that steals picturesque views of nature from

its surroundings consistently while blending into its surrounding context and community⁴⁵ as seen in Figure 24 and Figure 25.



Figure 24 Clear visual connection between interior & natural setting outside. Picture by Rene de Wit Source: www.dailytonic.com/rehabilitation-centre-groot-klimmendaal-by-koen-van-velsen-architectenbureau-nl/ (accessed: August 2016)

Thus, the structure uses glass and aluminum and combining various size voids, and light wells are provided to ensure visual connections between different levels allowing natural daylight deep in the heart of the thirty meters wide building. The Interplay of prominent colors combined with natural and artificial lighting enlivens the interior spaces. Furthermore, the use of sustainable building materials and materials that need little maintenance for floor finishes, ceilings and facade cladding resulted in a building with increased lifespan which is easily maintained.

⁴⁵ www.dailytonic.com/rehabilitation-centre-groot-klimmendaal-by-koen-van-velsen-architectenbureau-nl/ (accessed: August 2016)



Figure 25 Wide, spacious, well-lit circulation with clear visual connection to the natural surroundings. Picture by Robt Hart. Source: www.dailytonic.com/rehabilitation-centre-groot-klimmendaal-by-koen-van-velsen-architectenbureau-nl/ (accessed: August 2016)

The facility brings together transparency, diversity, continuity, the play of light, shadow, color and the experience of nature into a stimulating healing environment⁴⁶ as mentioned earlier in the discussion of evidence-based design. The building maintains a transparent connection with its natural surroundings, blending interior and exterior and maintaining a strong natural presence throughout the building; which allows patients to invigorate while walking past. This precedent shows us how a practical implementation of the theory of Biophilia would be like simply through carefully choosing the correct context to surround the building.

⁴⁶ Basson, (2014)

3.3 Maggie's Cancer Centre, Scotland



Figure 26 The Maggie's Cancer Centre nestled amongst trees, adjacent to a Hospital. Source: www.fastcodesign.com/1665160/maverick-rem-koolhaas-will-now-blow-your-mind-by-building-a-healing-center (accessed: August 2016)

3.3.1 Background

This building was built in 2011 and was conceived as a ring shape around a landscaped courtyard, and is nestled among the woodland in the grounds adjacent to a Healthcare facility. According to Lily Jencks, the daughter of the Centre's founder everything has been designed to show an enthusiasm for life which is needed when you're fighting cancer – "you need something to give you a bit of life and power".⁴⁷ The rudimentary idea behind this design, which is valuable and applicable to the Caregiver Wellness Centre, is that the more casual and homely the environment, the better user will feel. In this case, the entire

⁴⁷ www.maggiescentres.org/our-centres/maggies-glasgow/architecture-and-design/ (accessed: August 2016)

environment has been carefully planned to avoid a clinical experience not just for patients but also for their family and friends. Furthermore, the Architect in charge of the project, Ellen Van Loon states: "I think it should be a building where the space and the quality of the space and environment are the most important thing."⁴⁸



Figure 27 The Maggie's Cancer Centre interior. Source: <http://oma.eu/projects/maggie-s-centre-gartnavel> (accessed: August 2016)

3.3.2 The Design

Instead of the usual maze of corridors and isolated rooms usually seen in healthcare centers, it features a series of glass-enclosed public and private spaces that ring a central courtyard. The interlocking spaces contain a shared living room, library, kitchen, and eating area with private counseling rooms. Most of the rooms have sliding doors with access or views of a specially designed courtyard. Interlocking rooms flow into one another while still remaining separate, "like a series of scenes of domesticity in which the kitchen, dining room and library appear in succession." This according to Koolhaas, makes this Centre feel homely, and greatly contrasting to the institutional atmosphere of a hospital.⁴⁹ He explains further by saying: "I don't think it should be a building that challenges people to live better; rather it should have a

⁴⁸ www.fastcodesign.com/1665160/maverick-rem-koolhaas-will-now-blow-your-mind-by-building-a-healing-center (accessed: August 2016)

⁴⁹ www.maggiescentres.org/our-centres/maggies-glasgow/architecture-and-design/ (accessed: August 2016)

direct effect on the people who use it. The space we have is great because it is linked to the existing hospital, but far enough away from it for us to create another world. It has both privacy and a central position; both sheltered and slightly exposed. The center will have a holistic feel and hopefully, will provide respite and comfort for people.”⁵⁰ This approach relates to the idea of architecture as part of the therapy, mentioned earlier, which is an important approach for this study proposal.

In relation to the biophilic approach, yet again, this Architect also opted for a design that is purposely placed in a woodland, also making sure that the user has a consistent visual connection with surrounding greenery whilst within the spaces created. However, this design went further, successfully enhancing the experience with a well-designed landscaped courtyard, strengthening the visual connection to nature not only looking outward but also inward.

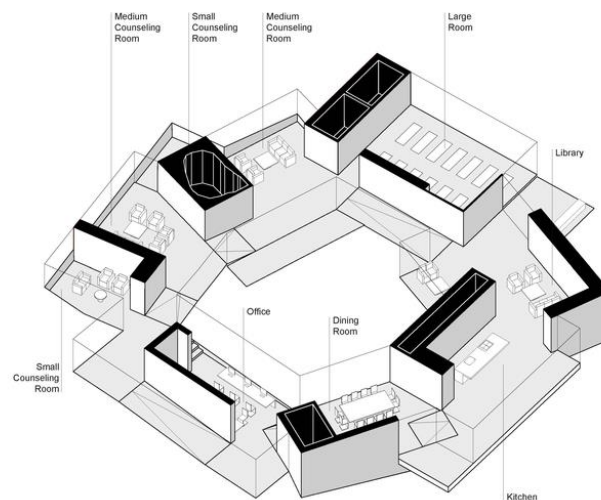


Figure 28 Interlocking spaces built around a central courtyard. Source: <http://oma.eu/projects/maggie-s-centre-gartnavel> (accessed: August 2016)

⁵⁰ www.fastcodesign.com/1665160/maverick-rem-koolhaas-will-now-blow-your-mind-by-building-a-healing-center (accessed: August 2016)



Figure 29 The interior with views to the courtyard. Source: <http://oma.eu/projects/maggie-s-centre-gartnavel> (accessed: August 2016)

3.4 PAIMIO SANATORIUM, FINLAND

3.4.1 Background

Architect Alvar Aalto's rise to success as a modernist architect to the ranks of modernist pioneers such as Le Corbusier was due to his fresh architectural vision of his time, to serve the sick and isolated people (Mafisa, 2011). This can be predominantly seen in the design of his sanatoriums. Although built in modernist period, it is clear that Aalto practiced his own version of modernist architecture deviating from the philosophy of modernism.

Aalto believed that architecture should not just operate solely as a 'functionalist machine' but rather, it should be well suited for its inhabitants and users as he had identified, long before the explorations of environmental psychology, that our surroundings affect us. This became manifest in his design of Paimio Sanatorium in Finland. Aalto had placed the sanatorium on the mountainous slopes that boasted stunning views all around the site. Thus, nature seemed to be the key factor for the design as the plan fans out 'bio-dynamically' positioned over the site to take full advantage of its views and natural sunlight.

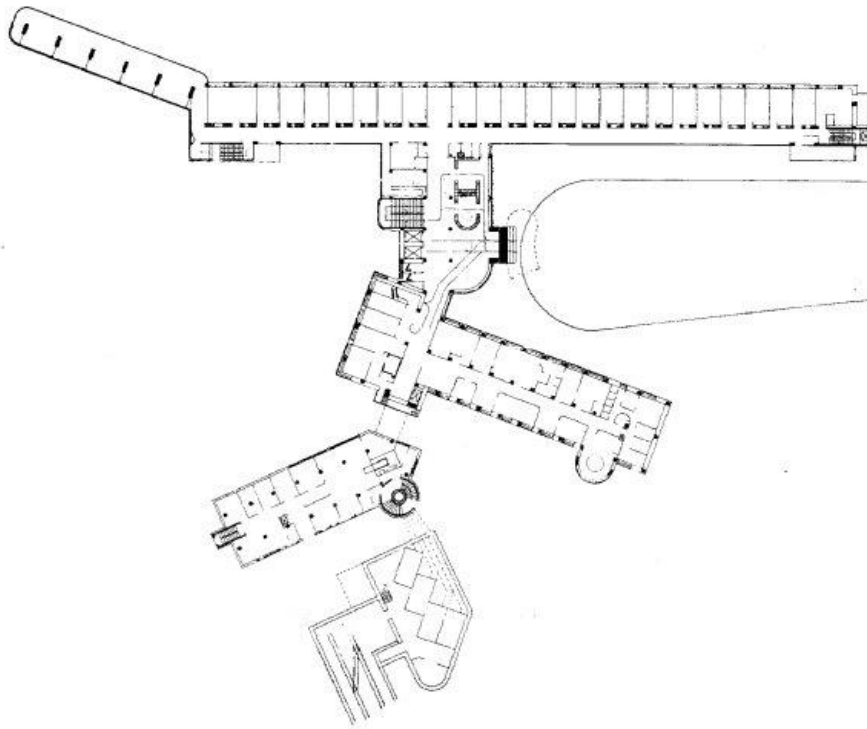


Figure 30 Plan of Paimio Sanatorium by Alvar Aalto. Source: eng.archinform.net (accessed: August 2016)

3.4.2 The Design

Sanatoriums were ideal for principles of functionalism and modernism as they were mainly focused on fresh air, the sun, lighting and the connection with nature. However, Aalto went a step further and focused his attention on the effects of designing a building that combined medical and psychological views together with advanced construction technology and design of his time, to creating a building that would function as a “*medical instrument*” (Mafisa, 2011). This relates back to the concept of architecture being part of the therapy.

The Paimio Sanatorium’s planning was derived from the separation of different health variants of the patients so that similar groups are close to one another to form a wing. These wings are connected by the central building that has services and functions commonly needed in all the buildings. The building services are cleverly hidden in the central columns of the building that can be accessed and maintained from the corridor away from the patients. The design is also a valuable and unique precedent as it pays attention to the patient’s needs. Each ward is stacked with ‘ribbon’ like windows that form a continuous band around the building that opens out to cantilevered sun balconies which are south-facing to optimize light allowed into the wards. These long balconies allow patients to come out to enjoy the healthy rays of the sun and air. The healthier patients can use the roof-top solarium that has remarkable views of the surrounding landscapes and tree tops (Mafisa, 2011).



Figure 31 Picture of exterior of building. Source: eng.archinform.net (accessed: August 2016)

Aalto stated that “the ordinary room is a room for the vertical person, so one must be designed with that in mind” As a result, the two-bed rooms are primarily planned with that in mind: the ceilings are painted darker in comparison to the walls, to have a more restful gaze; the room light is mounted away from the wall and the patient's head to avoid harsh light, is then reflected off the walls and ceiling where a semi-circle is painted. The slabs are canted to reflect light back into the room to provide a sense of visual release (Mafisa, 2011). Furthermore, the use of color is very carefully thought out, as color schemes vary around the hospital in order to stimulate healing and soothe the patients. The primary circulation routes are brightly colored while the more public, shared spaces are painted in calmer tones (Mafisa, 2011). The design approach of Paimio Sanatorium was for the patient's well-being and was dedicated to catering for the needs of its patients. This is manifested in every detail and its prevalent quality of natural lighting. Lastly, the Paimio Sanatorium's spatial qualities and the therapeutic environment were greatly beneficial to the treatment of Tuberculosis, which was a major virus at that time, and remarkably remains a useful facility as its present adapted function as a hospital. In the opinion of (Mafisa, 2011), this Sanatorium's healing properties should be applauded for its functionalistic approach and service to the users.



Figure 32 Picture of interior of the building. Source: eng.archinform.net (accessed: August 2016)

3.5 BIMARISTAN ARGUN AL KAMALI, SYRIA

3.5.1 Background

In mid-12th century Syria, great investment was made on the development of art and architecture; the hospital was seen as the crown jewel of the new ruler's attempt to refashion his city. These hospitals called 'bimaristans' were designed and built to look beautiful. The Bimaristans⁵¹ had become part of the architectural landscape and of a complex system of institutions that defined urban Islam⁵².

These institutions were well advanced compared to European counterparts during this time. Unlike their European counterparts, these spaces were controlled through the connection between internal and external spaces (as highlighted in this example). Unfortunately, by the 19th century, these institutions were overpowered by European colonial rulers and replaced by westernized medical institutions.

Most of these facilities were symmetrically situated around an open courtyard with connections to natural resources; such as rivers and canals⁵³. Water was a very significant basic resource for these institutions, Streams would run through some courtyards to the center, where a pool was built, as this was regarded as a therapeutic amenity for the ill.

One of these buildings, the Bimaristan al-Arguni (built 1354), is located in Bab-Quinnisreen Quarter of the City of Aleppo and was built by Arghun al Kamili of the Mamluk sultanate. This facility is regarded as one of the most significant traditional healthcare facilities ever built in the 14th century. The hospital was

⁵¹ Literally meaning Place of the Sick.

⁵² <http://melbourneblogger.blogspot.co.za/2016/05/medieval-hospitals-in-islamic-cities.html> (accessed: August 2016)

⁵³ Verderber, *Innovation in Hospital Architecture* from Foote (2015)

Aleppo's main healthcare institution which received funding for medicine, equipment, and research provided by the ruling Sultanate of the time.

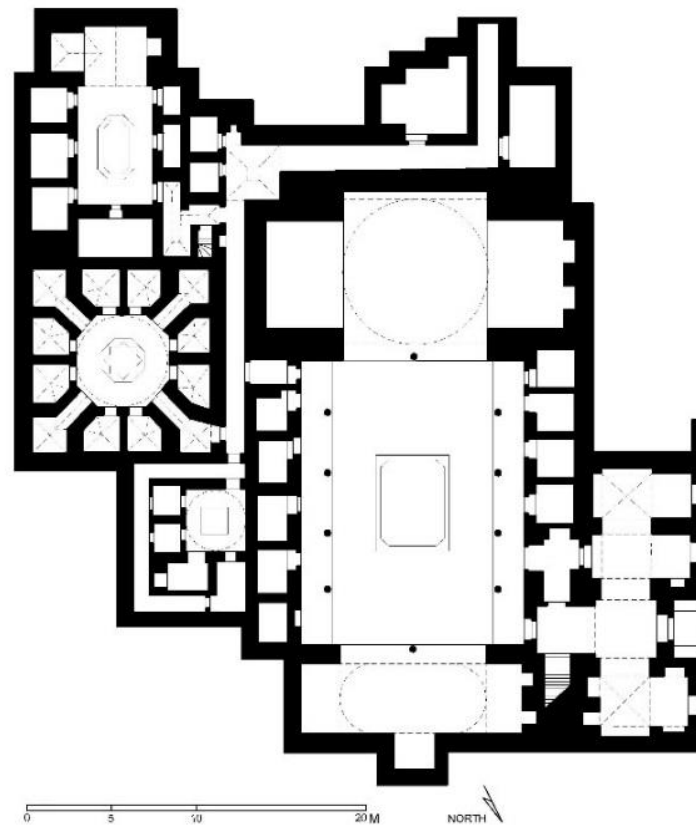


Figure 33 Plan of the bimaristan Building. Source: http://archnet.org/sites/1801/media_contents/ (accessed: July 2016)

3.5.2 The Design

The hospital's complex programmatic plan can be seen clearly in figure 31. Intricate architectural elements and ornamentation can make up part of the design evident in figure 33. The building has separate wings to accommodate the different programs of the facility. The main parts are the main entrance, the outpatient examination area, inpatient rooms, service areas. The main entrance is located on the west side of the building; it has large timber doors covered with plates of copper. These doors lead onto a hallway. This room functions as a control to the other parts of the hospital; it also contains the

pharmacy and storage for the medical supplies. on the right to this room, there are two waiting rooms and the out-patient examining rooms.



Figure 34 Picture of interior courtyard with fountain, plants and traditional Islamic Arches. Source: http://archnet.org/sites/1801/media_contents/4108 (accessed: July 2016)

The main courtyard is a large rectangular open space with a big fountain and a water-well which can be seen in figure 32. The courtyard is wrapped with peristyle that opens up to various functions. The southern side of the courtyard opens to the large 'Iwan' with ornaments of vegetation; this is mirrored on the northern side by a smaller 'iwan' with a similar facade and a small hallway that leads to the larger examining or operating rooms.

In main entrance hallway also leads to three more independent wings that are more secluded, further from the noise on the street. Each wing has its own smaller courtyard, individual rooms. The degree of

privacy and security varies according to the patients' it houses. One wing could be securely locked, acting as an isolation ward, in the case of contagious disease, while another was highly secured through barred windows and limited access for the mentally ill. The main courtyard is the most open intended for the non-contagious patients. The main bathrooms at the end of the hallway are shared between the three wings. The service area including the kitchen is connected to this end of the hallway and accessible to the street through the service entrance on the southern side. This allowed for better accessibility to the medicine and food storage⁵⁴.



Figure 35 Picture showing openings for light and ventilation. Source:http://archnet.org/sites/1801/media_contents/4115 (accessed: July 2016)

These hospitals incorporated pharmacies, dispensaries as well as social spaces, mosques, and spacious courtyards.⁵⁵ A mix of functions with social spaces, in the case of Caregiver Wellness Centre, could help the user reconnect to the community and overcome the feeling of isolation they could possible experience. It's is important to note that the understanding of the complex relationships between the

⁵⁴ Source: http://archnet.org/sites/1801/media_contents/4116 (accessed: July 2016)

⁵⁵ Foote (2015)

different elements in the design of the hospital is what made Bimaristan al-Arghuni one of the most significant hospitals of its time. This precedent study could help us understand that the importance of basic layout and the relationship of spaces to open courtyards. This building confirms the implementation of biophilia was an ancient architectural tradition in early Muslim culture⁵⁶, but one that still holds relevance in present day architecture. For this study, it strengthens the concept of the architecture being part of the therapy.

3.6 CONCLUSION

Winston Churchill concisely stated that the effect of architecture and our surroundings with the famous saying that: *"We shape our buildings and later they shape us."*⁵⁷. Thus, he too acknowledged architecture for its ability to change social perceptions and how we feel in our physical environment. Even though perceptions of architecture may vary, it is vital for all architecture to evoke a positive human response. The human psyche is the foundation of how we perceive and understand spatial environments. Since it could be argued that architects and their design could have a healing effect on the self, so too should architecture aim to do the same when designed for Caregivers and their loved ones.

"We shape our buildings and later they shape us."
- Winston Churchill

The therapeutic quality could be found in the relationship between any human being and architecture is beneficial to our existence. Architecture can be crafted to suit the psychological needs that can be beneficial to the user, in this case for the Caregiver and aid in the clarification of space. After critically

⁵⁶ Davary, (2012)

⁵⁷ Churchill (1943) from www.winstonchurchill.org/resources/quotations/499-famous-quotations-and-stories (accessed June 2016)

analyzing the precedent study, each case was studied carefully to highlight that which is beneficial in each architectural intervention that could help with the development of the Caregiver Wellness Facility further in relation to the design. Architecture's role in therapy cannot be overlooked.

4 CHAPTER 4: CASE STUDIES

4.1 INTRODUCTION TO CASE STUDIES:

This section will be focused primarily on a directly responsive architecture that explores Islamic architecture adapted to the local climate, community, and context of Durban. While the selected buildings are fixed into the context, they also display to an extent, modern, contemporary position. These are further defined by the use of locally available building methods, material, and construction skill. Adapting and engaging with the particular context, the projects do not force an imitation, represented version of an Islamic architectural tectonic, but rather display an essential respect to place, society. Both buildings equally exhibit various attempts for binding Islamic architecture and connections to nature together. This approach to architecture will be the fundamental principle drawn from the studies; the concept of Islamic architecture combined with biophilia.

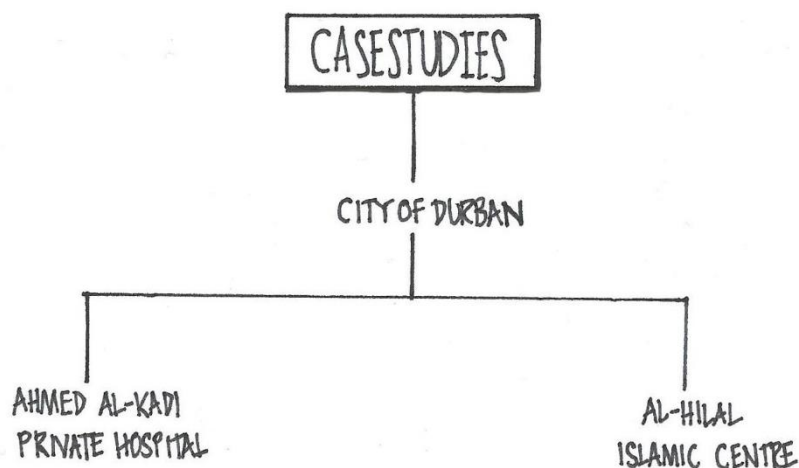


Figure 36 Diagram Outline of Case Studies. Source: Author (2016)

The case studies in this chapter are analyzed according to the facility relates to the user, context, and connection to spirituality and nature. An illustrative overview of the analysis of each facility will also be included in this chapter. The buildings, referred to in Figure 36, located in Durban, will be utilized as case studies to draw useful design lessons that could benefit the design of the Caregiver Respite Facility:

The following case studies are part of first-hand research that is analyzed and evaluated based on the ideas that relate to the discussion in the preceding chapters. While they do not address all the needs of the informal Caregivers directly, there is an opportunity to critically analyze or identify particular design elements and ideas within the design of these facilities that could guide the design of a Respite Care Facility.

4.2 AHMED AL-KADI PRIVATE HOSPITAL, MAYVILLE, DURBAN.

4.2.1 Background

The Ahmed AL-Kadi Private Hospital in Durban is an example of most recent Islamic health care development in Durban. It is a project of the IMA (Islamic Medical Association of South Africa) aimed to complement the existing hospitals in order to cope with the existing burden of diseases and to fulfill the client's vision of providing a unique hospital. By reflecting their Islamic ethos and values the hospital is intended to reflect healthcare through the Islamic approach.

The focus of the study of this building is to demonstrate that healthcare can be positively implemented in an Islamic environment. Thus, the design follows the traditional Islamic aesthetic guidelines through the geometry of form, geometric order, clarity of surface treatments, the honesty of materials, functionality, and harmony⁵⁸. The intention was to provide spirituality as part of holistic care as well as delivering a practical, comfortable and patient orientated hospital. The hospital will be open to patients of any race or

⁵⁸ Narooh, (2013)

religion but will promote an Islamic ethos which guarantees the rights and respect of patients. Some of the operational approaches that include⁵⁹:

- Provision of Halaal food⁶⁰
- Male and female patients being treated, where possible, by nurses of their respective gender
- The use of modest patient attire that adequately covers the body
- The medical and surgical wards being separated into male and female only wards.

4.2.2 Discussion

According to the client⁶¹, an examination of the Islamic bioethics reveals that a long-standing professional and moral base governing the treatment of illness. The holistic connections between body, mind, and emotions which western neuroscience has comparatively recently begun to examine have been inherent in Islamic medicine from inception in the 8th century and overlay a powerful spiritual code on the design of healthcare facilities.

This hospital model brings together spirituality and social responsibility. Cultural responsiveness is woven through the design both in terms of the hospital culture as well as being sensitive to the regional demographics. The concepts of Islamic architecture such as water features, screens courtyards, arches, and domes are evident in the design. Furthermore, decorative screens provide privacy, ventilation, serve as dust filters and most of all use natural light to create reflective patterns. Landscaped courtyards with natural shading are incorporated in the design. The coffee shop and pause areas encourage social interaction and provide a positive distraction.

⁵⁹ Ahmed Al-kadi Private Hopital, (2013)

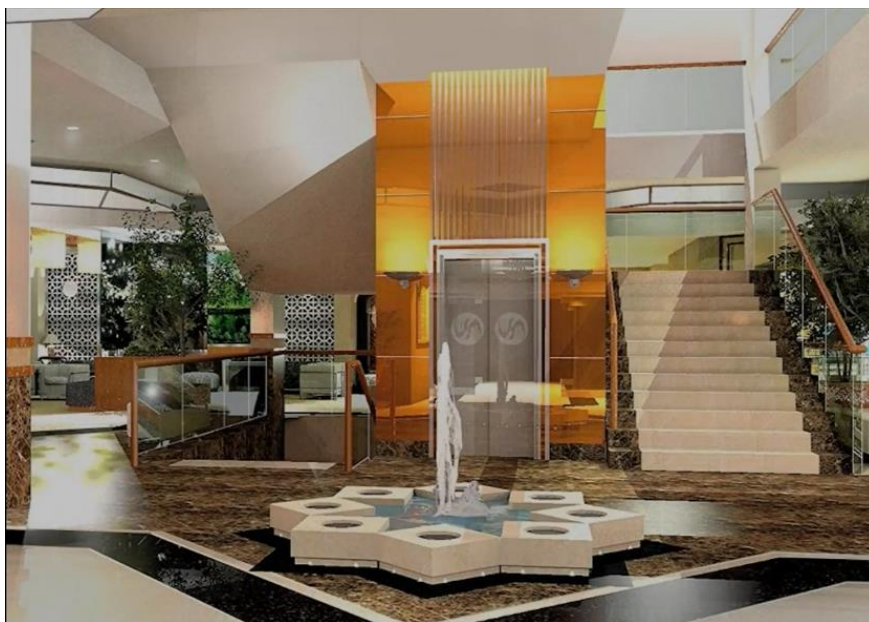
⁶⁰ Halal is the Arabic word for permissible. Halal food is that which adheres to Islamic law, as defined in the Quran. Facility will ensure that Muslim patients have no doubt of cross contamination.

⁶¹ Ahmed Al-kadi Private Hopital, (2013)

According to the Architect (Naroath, 2013), humans are hard-wired to appreciate and benefit from exposure to nature, the design of the hospital places great emphasis on the natural light and views, access to nature or images of nature, intelligent lighting, and noise control, clarity of orientation and wayfinding, all of which contribute to stress reduction. This relates back to the earlier discussions in this study on the theory of biophilia.



*Figure 37 3D cutaway showing planning.
Source: Naroath, (2013)*



*Figure 38 3D render showing interior.
Source: Naroath, (2013)*

This case study confirms us that the client's preference for Islamic design did exist and moreover, present day practitioners and clients acknowledge the benefits of biophilia and design for the human experience in design, like Alvar Aalto in the past. These case studies also illustrate that the approach of combining Islamic architecture and connection to nature are practical and could be implemented in modern day healthcare environments. Since this facility is designed for the same community that this study proposes a Respite Care facility, it strengthens the case for such design to be approached in a similar manner, that is, through incorporating a clear, well thought out connection to nature and spirituality in the spatial design.

4.3 AL-HILAL ISLAMIC CENTRE, DURBAN

4.3.1 Background

This building, located in Overport, Durban - originally known as the Admiral Hotel & Liquor store, was later converted into what is now known as Masjid-al-Hilal. The Al-Hilal Trust had completed its project of building the grand Mosque and Islamic Centre, designed by Durban-based G.M Khan Architect in 2004. It now serves as a source of guidance for spiritual and religious knowledge for the Muslim community. This center caters to the needs of Muslims in the greater Durban area, helping them fulfill their Islamic obligations and spiritual needs. The Centre also hosts many local, national and international groups and short term spiritual events on an ongoing basis⁶². The design of this Islamic environment within its surrounding context holds valuable lessons that may be beneficial and relate strongly to this study. The design of the interior, especially the atrium, ablution and the main prayer area will be discussed further in this section.

4.3.2 Observations from the Visit to the building:

The large side doors with openable fan-lights increase natural lighting. High glazed clear storey windows complement the main prayer space with natural lighting. These openable fan-lights also improve cross ventilation within the space. Furthermore, a large retractable, sliding glass dome allows for natural ventilation and light to enter when open and allows natural light into the interior space when closed.

Planter boxes on multiple levels in the atrium with plants overhanging (See Figure 39). This has a slight resemblance of the Hijazi style architecture seen in House Angawi, Jeddah (See Figure 40), with planters growing on the multiple levels of an internal atrium but in a stronger intent. This small biophilic gesture does, however, connects the visitor to nature and benefits the space. However, the plants have been reduced in number over the years and are not well maintained in the last few years.

⁶² www.alhilal.co.za/about (accessed: June 2016)



Figure 39 Contemporary Islamic design in Al-hilal Building's atrium with hanging plants facilitate a connection to nature. Source: <http://alhilal.co.za/gallery.htm> (accessed: June 2016)



Figure 40 Ancient Islamic Architecture in House Angawi- Natural lighting, hanging plants, timber, natural stone facilitates a stronger connection to nature. Source: http://interactive.aljazeera.com/aje/2015/man_who_dreams_of_old_mecca/ (Accessed: October 2016)

Extra shading to the west by means of a lean-to roof show that orientation of the building and shading of openings from the harsh sun was well thought of in the design. From the exterior, a large exterior arch portico expresses the main pedestrian entrance. However, orientation wayfinding within the building is relatively confusing as there are many doors leading out of the building. This, in a healthcare environment, may increase the stress levels experienced by the user.

4.3.3 Lessons from Discussion with the Architect team

At first, the design proved tricky. It was a major challenge in adapting the design, re-using the existing and saving the structure where possible. The double volume height, together with a front interior 'Mihrab'⁶³ wall lacks major distracting decorative elements to improve concentration whilst praying or meditating in the main prayer area and greatly enhanced the quality of the space. Many users have expressed to the architect their satisfaction with the main prayer space as a place they are attracted to, feel comfortable to pray in or dwell within longer.

The repetitive uniform rectangular windows on the front interior elevation are intentionally placed higher up to blocking out of the outside world, only letting in natural light and air. This was done with the intention of reducing distractions and improving concentration within prayer thus improving the spiritual experience within. Again, a small biophilic gesture through the use of exposed face brick on the interior walls, contrasted with textured wall coatings is consistent throughout the space with the well-coordinated use of colors. The colors add a quality of calmness and serenity to the interior.

The interior details like the patterns of the carpet break away from the traditional style of carpets, utilizing squares and blocks to define the prayer rows and was relatively new to the community at the time. The

⁶³ a niche in the wall of a mosque, at the point nearest to Mecca, towards which the congregation faces to pray.

carpet design was a lost opportunity to introduce traditional Islamic pattern work from a biophilic approach that could help reduce stress and invoke a spiritual, meditative effect for the Worshipper. The use of Arabic calligraphy, Islamic arches, and domes, even though used sparingly helped achieved a good quality space for spiritual activity. These elements, therefore, need to be incorporated into the spaces when trying to strengthen or evoke a sense of spirituality within the environment for Muslim patients. This, in turn, will strengthen the coping mechanisms of the Muslim patient.



*Figure 41 The main prayer space showing the Mihrab wall with high clear storey windows.
Source: <http://alhilal.co.za/gallery.htm> (accessed: June 2016)*

5 CHAPTER 5

5.1.1 Introduction to Data Collection

Twenty female Muslim participants between the ages of 21 and 77 years who are involved in informal Caregiving activity in the Durban area were asked to fill in the questionnaires. Convenience sampling was used to recruit willing participants. The willing participants who were chosen were introduced to the researcher through family members and friends.

The semi-structured interview in the form of a basic questionnaire was developed to create discussion, gauge current awareness or ignorance regarding existing respite care facilities and to ask questions relating to their **perceptions** towards a proposed Caregiver respite initiative, a wellness environment, treatments and current constraints of their caregiving environments, and possible recommendations relating to improving the function of a Caregiver Wellness Centre. The questionnaire also sought to inquire about the importance of the social, family bonds or networks, the attitudes to spiritual activity in treatment and relevance of connection to nature. Participants were reminded to steer clear of mentioning any information regarding the medical condition of their loved ones or even themselves.

5.1.2 Analysis and Discussion

In this section, we will discuss informal Caregivers' perceptions of respite care in relation to their needs. The following responses to the questionnaire stood out in the discussion as a motivation as to why developing facilities to assist informal Caregivers would be helpful to the community:

"Hiring a Professional full-time Caregiver is too costly and I don't need a Caregiver all the time"

"the element of trust needs to be built up with the individual or they can't be left alone at home"

"transport for the individual is an issue, especially where I stay."

"my hired Caregiver emptied my entire house - she knew where everything was kept."

Most participants required an explanation regarding a respite care facility, showing ignorance regarding the concept of respite care. However, Muslim Women Informal-Caregiver's perception and attitude towards a proposed Caregiver Respite facility focusing specifically on caregiving challenges was met with a positive response and warmly welcomed after a brief explanation.

Furthermore, all participants were not knowledgeable about their available respite options with the exception of home-based respite from family or friends. While the literature does mention other types of respite too, hiring a professional or independent Caregiver or home-based Respite Care is not within the reach of most people as the cost may be prohibitive or the issue of transport or safety may be questionable.

"It becomes a problem when the place you live in needs repairs or renovation or say the bathroom needs to be revamped to suit the patient."

"We need to stay somewhere when my family has to go to Johannesburg for a few days, it's not safe to live alone especially with a sick person."

"living in small apartments, less place and stairs are always a problem - I have to carry her back up to the bedroom at night. Sometimes I just need a break from the stairs and the routine."

"Coming closer to exam time, adds extra pressure on the kids going to school, space is also a problem. The house with a very ill patient is very tense and that's not good for studying."

"studies get disrupted when another family member in the house is sick. A few days of respite will definitely make a big difference."

"it is very difficult living here with a patient 24/7 – you can't go out often as you like. When the lift doesn't work – I have to walk up 6 flights of stairs for a few days until the lift is fixed"

These scenarios proof that there are everyday realities where the need for finding an alternative short term care environment arises. A Caregiver respite facility will make it possible for the patient to be housed in a safe environment and make it easier for the informal Caregiver as it keeps one more option available for him or her.

“Most times, I just need a few hours to go buy groceries or to sort out a bill – I can’t always be asking others for a favor, they have other work to do.”

“We need a few hours every month to go pick up medication or go for a doctor’s check-up and have to leave home really early in the morning. Short term respite would help, even if it is half a day every month.”

From the above quote, we learn that the location of any such respite proposal needs to be in close proximity to other amenities especially **medical facilities** in order for the informal Caregiver to make most of his respite break. Instead of a mere holiday, respite may be handy for the informal Caregiver to get urgent work done while the patient is being seen to in a caring environment.

“Sometimes you need to let others care so that the patient doesn’t have too much reliance on one person.”

“need a place where both of the patient and Caregiver can stay, that will help reduce the feeling that the person cared for was ‘dumped’ by someone.”

The issue of informal Caregiver guilt may be reduced if both the informal Caregiver and Care Recipient are being attended to in the proposed facility:

“It will allow the Caregiver to plan and attend a social gathering like even a wedding. Many times, we just say no because there’s nobody to watch over him.”

“He and I (the Caregiver) sometimes just need some time away from each other, need some space, even if it’s a little time, without having to worry something will happen to him or that nobody is there to see to him.”

The social impact of informal caregiving can be addressed or reduced if a respite facility is available to the informal Caregiver:

“My Flat (apartment) is in a state of disrepair – feels depressing living there. It is nice to get out sometime and get refreshed”

“The apartment is small, and it gets cluster-phobic inside. We cannot really go anywhere if there’s nobody to see to her.”

“Most times, for days, we don’t go anywhere, because it is difficult or it is nowhere safe to go. We also need to make sure there will be a clean toilet nearby, or that the place is protected from the wind and cold so that we don’t get sick”

“this house is like living in a prison, There’s no view from the window. I have to ensure everything is locked up because it’s dangerous. It’s stressful not having anywhere to go for even a short while just to freshen up”

“Going on holiday with a patient doesn’t help, you come back more tired. You need a change of environment where someone else can watch over the patient even for a short while, while you go pray or sit in a quiet place and refresh or watch the world go by.”

The change of environment is seen as a great opportunity for the informal Caregiver and Care Recipient to get refreshed:

“living in another family members house is uncomfortable, I feel like I maybe inconveniencing them.”

“living in another family members house is not a problem, but I won’t go all the time. I don’t want to inconvenience anybody.”

“Going off to stay with other family members house not possible, especially as they only have one toilet/bathroom or not enough rooms.”

“My children live in Johannesburg; I can’t manage traveling long distance anymore.”

“it’s hard for the family to come stay over and help even though they willing to help. There is no space.”

“I can’t live at my daughter’s place, even though she lives nearby. I cannot get up and down the stairs easily.”

“The Caregiver and their family need to be in an environment where they see that they not alone, there are others that have similar problems & there are people out there who willingly help.”

“Allow Caregivers to feel part of that place, enjoy and benefit from the care environment too”

Seeking respite by living with others is not always possible or easy as it seems. The lack of space in urban dwellings, or unsuitable ablution facilities or accessibility for the patient don’t allow for the informal Caregiver and Care Recipient to live elsewhere for a short while.

It was also highlighted the importance of privacy and gender segregation where possible, would be an integral part of the design, especial where overnight accommodation or relaxation spaces would be provided.

Participants also expressed that while Islamic architectural elements were not necessary for improving spirituality, rather the provision of space for the activity and rituals that are done privately or collectively would help.

However, Calligraphy with messages of hope would be preferred to art. Art with animated imagery was also disliked.

The possibility of good views to the exterior was also seen as important, where one could look out onto scenery while engaged in the spiritual activity. Some participants suggest space that was not too busy visually, while others had no problem with ornamentation. This means that the both settings should be provided.

Another factor that was brought up was the possibility for family visitors to be around the patient without inconveniencing others.

Most participants yearned for secured garden spaces with good sunlight, as they have become isolated from this due to the lack of mobility.

5.1.3 Recommendations

In this concluding section of the study, informal Caregivers recommendations for the design of a Caregiver Wellness Centre for Durban will be discussed:

5.1.3.1 Functions:

Mixed use facility:

It can be recommended from this study that the proposed facility must not be a standalone facility. It should house multiple functions in order to maximize the benefit for the informal Caregiver in a short space of time. Furthermore, a mix of activities could help reduce their feeling of isolation.

Treatment and therapy:

Alternative therapies, especially drugs free approaches were viewed in a positive light by participants and could, therefore, be incorporated into the program of the facility⁶⁴. This may include acupuncture therapy, cupping, aromatherapy etc.

Educational training activities:

Facilitating educational skills training and empowerment programs was in a seen a positive light by all participants. Participants confirmed the need for education, as mentioned in the literature, indicating the need for greater training, skills, and knowledge with regard to disease treatment options, disease management, and caregiving skills. A learning environment could be an important component of the proposed mixed-use facility.

Accommodation:

A basic lodging facility or boutique hotel facility could allow families to book in should be looked into:

- this will allow the informal Caregiver and their family to enjoy Respite Care with the patient nearby.
- This will also allow Volunteers to stay over if necessary to help with caregiving responsibilities.
- A Spa facility could also be utilized as part of the therapeutic activities intended to reinvigorate the informal Caregiver as well as to generate income for the facility.
- On-site staff accommodation could be provided, as a few participants recommended:

A residential living quarters (rentable space for income generation) with options for volunteers who can choose to live within the 'care zone' – "this allow us to lend more support and time"

⁶⁴ Kathree, (2006) study identified the popular alternative health therapies among Muslims living in Kwa-Zulu Natal.

5.1.3.2 Experience:

Social Connection:

Incorporate social spaces for gatherings that will allow the proposed facility to be well connected and familiar with the rest of community. This, according to some participants could be done through the incorporation of a library, reading lounges, media center, coffee shops, a public courtyard-type space, gardens or a small prayer hall for the community.

Connection to nature:

Participants expressed that they appreciated nature. However, most of them are unable to live in places with a good natural surrounding or find it dangerous to access them. Furthermore, two participants mentioned that there was a lack of sunlight in their environment, expressing that this was important for their health.

Spiritual activities:

All participants agreed that spirituality helped them through challenging times. This is confirmed in the literature where it is stated that spirituality is used as a coping mechanism (Eltaiba & Harries, 2015). One participant complained that due to informal caregiving responsibility, not much time is spent on pray as she would have liked to. The participant suggests that the proposed facility be built around easily accessible ablution and prayer spaces that allow spiritual activity as well as religious learning in groups as well as quite secluded spaces for individual meditation and contemplation.

5.1.3.3 Design Considerations

Location:

A central location was a key concern for most participants as they rely on public transport or lifts from family or friends. An ideal Location would be on a public transport route with active pedestrian routes.

Furthermore, the proposed location of the respite facility needs to be in close proximity to other healthcare facilities and retail activity and services in order for the informal Caregiver to make most of his respite break.

Religious preferences:

Zones within the building for a women-only environment, wherever possible is preferred by all participants, mainly due to religious preference. This would mean that general administrative functions accessible to all would have to be on ground floor, while upper floors would increase in privacy. This could also mean separate wards for male and female patients.

Most participants agree that the need for prayer and ablution facilities was of utmost importance in an Islamic care facility. The proposed facility will require easily accessible ablution and prayer halls that allow spiritual activity. Religious learning activity in groups could be provided in classrooms.

Female Muslim Volunteers needs:

It has been gathered from the questionnaire, that the proposed facility be focused on the needs of the potential volunteers from the community, especially females. This according to one participant could be done through the incorporation of a female youth club with a recreational facility. According to another participant, the creation of facilities aimed at younger Female Muslim volunteers was necessary to make it easier for them to stay longer. Safety was also a concern, and should, therefore, be prioritized.

“many of us Women professionals who have time and expertise can help out if there are facilities that are sensitive to our religious need – that is gender segregation where possible, general safety and provision of adequate ablution and prayer facilities.”

It can, therefore, be concluded from the study and backed by the literature that the participants were unsure what a Respite Care facility was all about. The term 'respite' is not commonly used and seem to have only gained popularity recently. It is only when the function of the facility was explained, that the participants understood it. However, none of the participants knew of any Respite Care Facility around them. This study also confirms that spiritual and religious preferences do exist amongst the participants and that the principles of therapeutic architecture that has previously been implemented successfully in other projects have been dissected in this study and could now be practically implemented into the design of the Caregiver Wellness Centre.

6 CHAPTER 6: CONCLUSIONS

In relation to the aims of this Document study, it can be concluded that it is quite clear that informal caregiving challenges are present, even amongst Muslim Women in Durban. The various literature together with the study confirms and motivates for informal Caregivers to be given greater consideration and attention in a respite care initiative, including the planning of respite facilities.

While more studies that are held over longer periods and include wider samples are necessary for the future, the information gathered in this study will greatly shape and improve the foundation for the architect's bottom-up approach to the design process, one that shows greater sensitivity in its planning to improve the informal Caregivers among Muslim women and their experience of such environments.

The concept of restorative architecture was explored to great lengths: a strong link between ancient Islamic architecture and nature was found in the literature. More specifically, a strong connection between Islamic architecture and the biophilic approach to architecture was discovered. This will be useful to the architect, as it strengthens his theoretical approach to the design of a wellness center.

In relation to the objectives that were achieved in this study, strong motivation can be offered to develop respite facilities in Durban in the near future. Furthermore, Muslim Women informal Caregiver's perception and attitude towards a proposed Caregiver Respite facility focusing specifically on their challenges was met with a positive response and warmly welcomed once the concept of respite care was explained.

All in all, useful design recommendations have been gathered, that could have otherwise been neglected, ignored or overlooked by either client or architect. This will greatly assist in guiding the architecture and theoretical approach to the design of such facilities.

7 CHAPTER 7: DEVELOPMENT/DESIGN REPORT:

In this section, the design development process will be highlighted, taking into consideration what was learned from the literature and study (see Figure 43) in relation to informal Caregiving, Islamic Architecture, Biophilic design for the development of the Caregiver Wellness Centre. This section will also include the Client design brief, accommodation schedule, site selection, site analysis and precedent study.

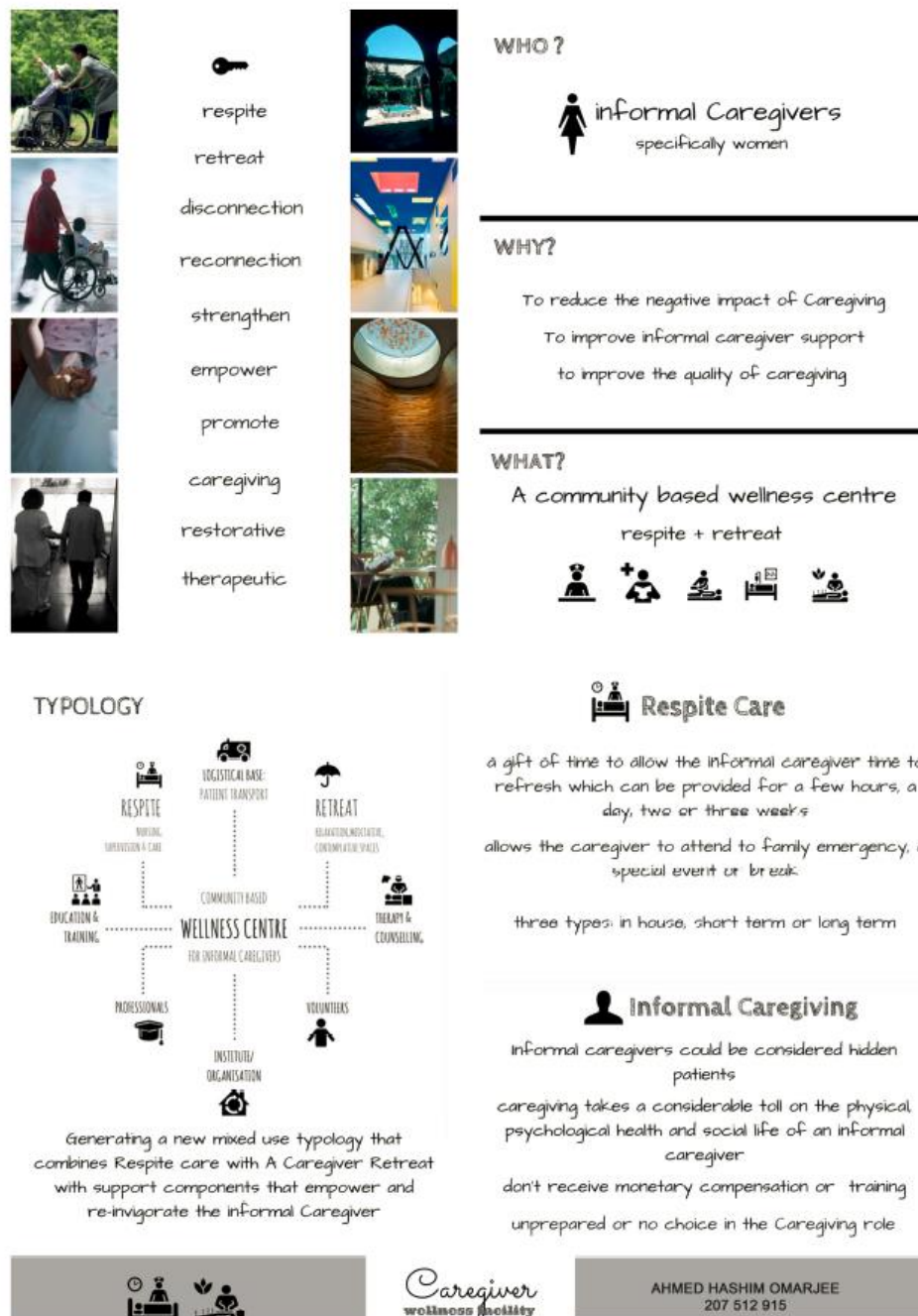


Figure 42 Design primer. Source: Author (2016)

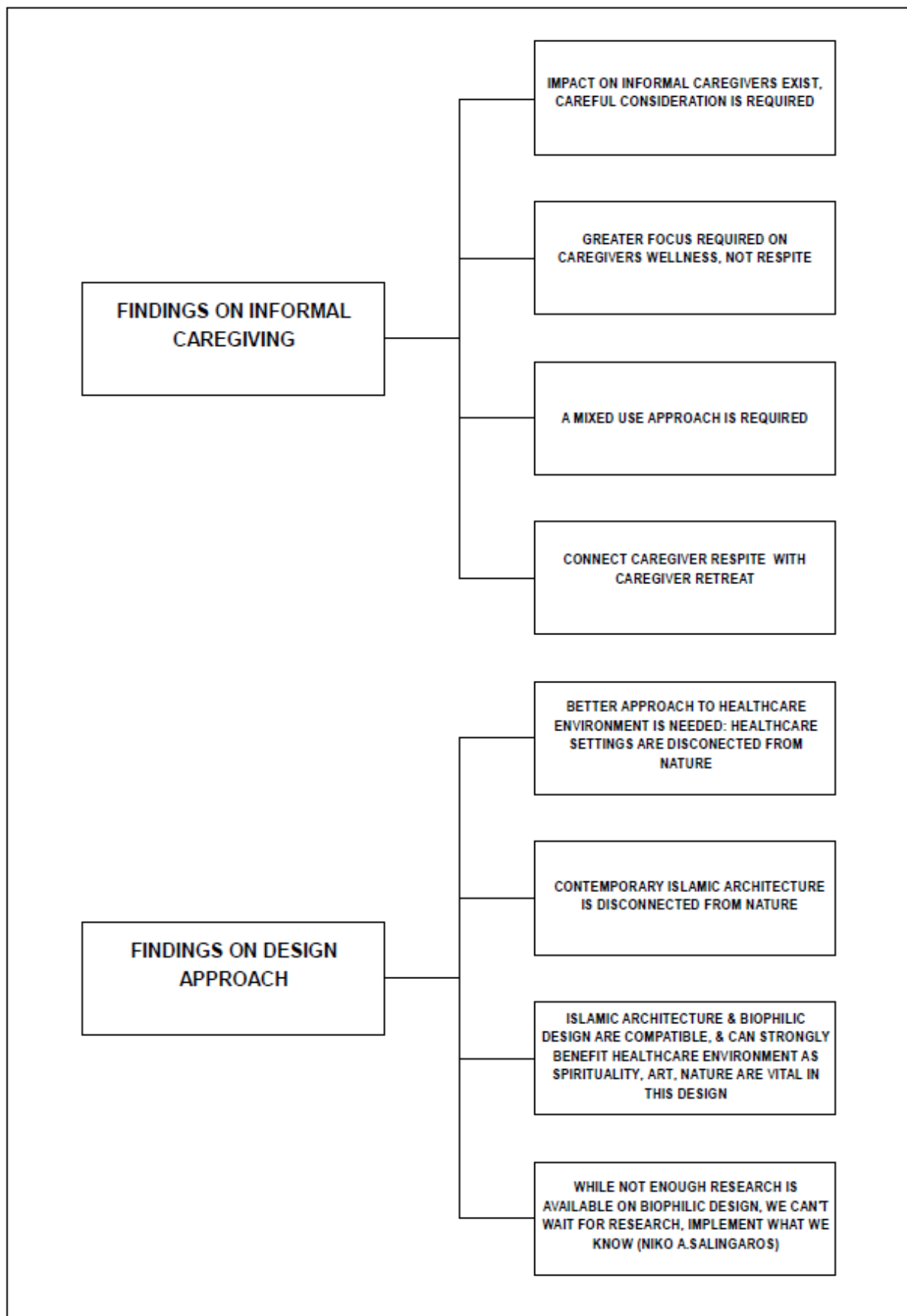


Figure 43 Summary of findings. Source: Author (2016)

DESIGN RECOMMENDATIONS FROM LITERATURE

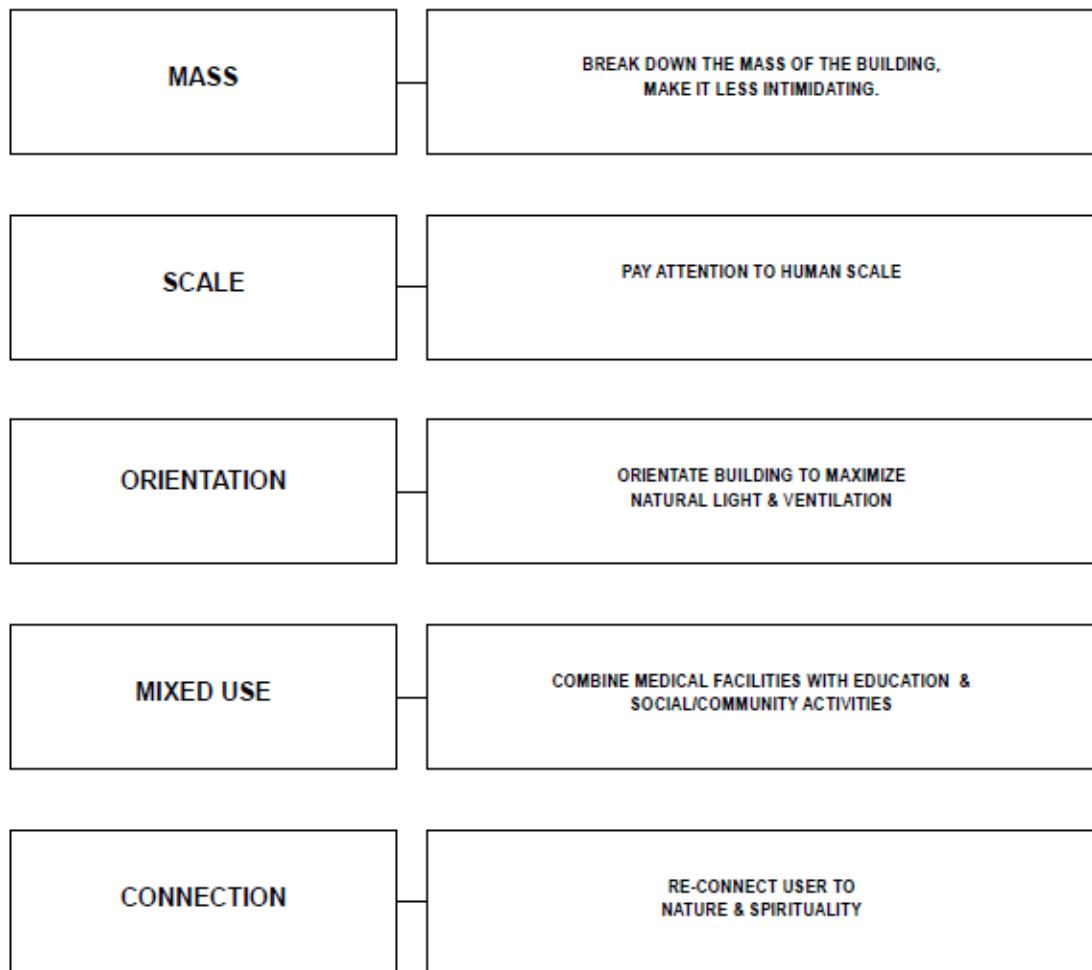
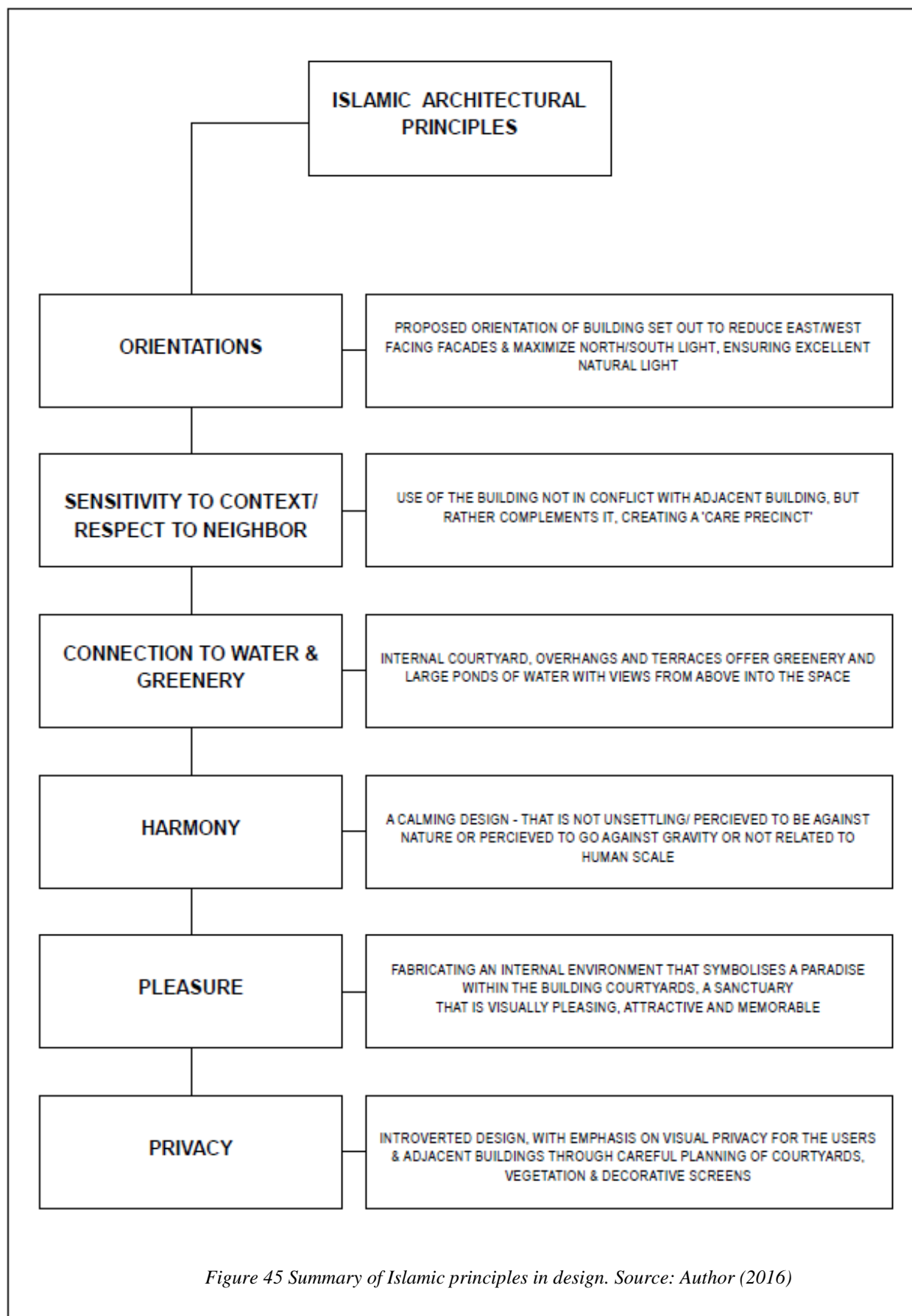


Figure 44 General design recommendations from literature. Source: Author (2016)



ACCOMMODATION SCHEDULE

NAME OF SPACE	AREA (SQ. M)	QUANTITY	TOTAL	
PRIMARY FUNCTIONS				
RESPIRE ACCOMMODATION (18 PATIENTS)				50% OF THE TOTAL LUNDS TO HAVE A SINGLE ROOM WITH RESPIRE
4 PATIENT ROOM (9 PATIENTS)	70	2	140	
SINGLE ROOM (9 PATIENTS)	23	9	207	
NURSE STATION	2	2	4	
STAFF TOILET	2	4	8	
TREATMENT ROOM	16	3	48	
MEDICINE ROOM	16	3	48	
DAY ROOM	20	2	40	
QUIET ROOM	20	2	40	
ISOLATION ROOM	20	2	40	
ASSISTIVE BATHROOM	4	2	8	
INTERVIEW ROOM	12	1	12	
STORE/ EQUIPMENT	12	2	24	
STORE/ LINEN	12	2	24	
SERVICES			643	
LAUNDRY	10	2	20	
KITCHENETTE	16	2	32	
DIRTY UTILITY ROOM	12	2	24	
CLEAN UTILITY ROOM	12	2	24	
CLEANERS ROOM	16	2	32	
			174	
HEALTHCARE MANAGEMENT				
OFFICES	40	1	40	
LOCKABLE STORAGE	12	1	12	
MEETING ROOM (SMALL)	16	1	16	
EQUIPMENT STORE	16	1	16	
CONSULT ROOM	12	1	12	
ASSISTIVE BATHROOM	4	2	8	
KITCHEN	16	4	64	
PATIENT WC	2	30	60	
STAFF WC	2	1	2	
VISITORS WC	2	1	2	
			232	
GENERAL ADMINISTRATION (GR. FLOOR)				
RECEPTION DESK/WAITING AREA	60	1	60	
ADMISSION OFFICE	12	1	12	
RECORDS ROOM/SERVER ROOM	16	1	16	
PARAPLEGIC TOILET	2	4	8	
TOILET	2	24	48	
STORE	10	1	10	
BOARDROOM (LARGE)	60	1	60	
STAFFROOM	60	1	60	
KITCHENETTE	10	1	10	
PHARMACY & HEALTH SHOP	60	1	60	
COFFEE SHOP/SNACK BAR	60	1	60	
			384	

Figure 46 Accommodation Schedule. Source: Author (2016)

ACCOMMODATION SCHEDULE

NAME OF SPACE	AREA (SQ. M)	QUANTITY		
(.CONTINUED)				
REHABILITATION AREA				
PHYSIO THERAPY ROOM	20	1	20	
OFFICE	12	1	12	
STORE	10	1	10	
PREPARATION ROOM	10	1	10	
WAX ROOM	10	1	10	
OCCUPATIONAL THERAPY ROOM	20	1	20	
OCCUPATIONAL THERAPY OFFICE	10	1	10	
SPLINTING ROOM	10	1	10	
GENERAL TREATMENT AREA	60	1	60	
			172	
EDUCATION & TRAINING (GR. FLOOR)				
LIBRARY	60	2	120	
READING LOUNGE	60	1	60	
CLASSROOMS	60	1	60	
FOYER/ WAITING AREA	60	1	60	
STORE	20	1	20	
TECHNICAL SUPPORT ROOM	12	1	12	
HALL	300	1	300	
OUTDOOR EVENT SPACE	300	1	300	
			932	
SECONDARY FUNCTIONS				
CHAPLAIN/COUNSELLOR OFFICE	16	1	16	
MULTI DENOMINATIONAL ROOM	20	1	20	
MORTUARY (WASHROOM)	60	1	60	
FAMILY VIEWING ROOM	20	1	20	
CHILD PLAY ROOM	20	1	20	
SEATING SPACE	60	1	60	
COUNSELLING ROOM	20	1	20	
			216	
CAREGIVER RETREAT (LOWER GR. FLOOR)				
RECREATION HALL	150	1	150	
THERAPY / SPA	300	1	300	
RELAXATION CUBICLES	20	1	20	
AQUARIUM/POND	150	2	300	
SOCIAL GATHERING SPACE	300	1	300	
CHILD PLAY AREA 2	60	1	60	
ART GALLERY	60	1	60	
			1190	
VOLUNTEER FACILITIES				
VOLUNTEER (STAFF) ROOM	60	1	60	
OFFICE	20	1	20	
SHARED OVERNIGHT ACCOMMODATION	60	2	120	
RECREATION ROOM	150	1	150	
			350	
GRAND TOTAL OF AREA			4293	EXCLUDING CIRCULATION, LANDSCAPE & PARKING

Figure 47 Accommodation Schedule. Source: Author (2016)

THE PARK ROYAL HOTEL, SINGAPORE

MASSIVE CURVACEOUS SKY-GARDENS, DRAPED WITH TROPICAL PLANTS AND SUPPORTING SWATHES OF FRANGIPANI AND PALM TREES, ARE CANTILEVERED AT EVERY FOURTH LEVEL BETWEEN THE BLOCKS OF GUEST ROOMS. GREENERY FLOURISHES THROUGHOUT THE ENTIRE COMPLEX, AND THE TREES AND GARDENS OF THE HOTEL APPEARS TO MERGE WITH THOSE OF THE ADJOINING PARK AS ONE CONTINUOUS SWEEP OF URBAN PARKLAND. THE HOTEL PERFORMS UNAMBIGUOUSLY AS A PUBLIC BUILDING.



Figure 49 Source: <http://www.dezeen.com/2013/10/10/parkroyal-on-pickering-by-woha/> (accessed: September 2016)

ALHAMBRA, GRANADA

COURTYARD SCALE, ORIENTATION, WATER FEATURES, CALIGRAPHIC PATTERNS, ARCHES AND VEGETATION



Figure 50 Source (from left): <http://laviwashere.com/5-reasons-ya-gotta-go-to-granada/> (accessed: September 2016); <https://www.flickr.com/photos/12592344@N04/6027203815> (accessed: September 2016); http://www.tzengs.com/SpainPortugal2009/Day10_Sevilla/Day10_Sevilla.htm (accessed: September 2016)

KHOO TECK PUAT HOSPITAL, SINGAPORE

THE GARDEN THEME IS DESIGN TO RELIEVE SOME OF THE ANXIETY OF, BOTH PATIENT & STAFF, THAT ACCOMPANY LONG PERIODS OF CARE. THE YISHUN POND, A CENTRAL FEATURE OF THE HOSPITAL, PROVIDES A SMALL OASIS OF SERENITY, WHILE A SERIES OF TERRACES HELPS FOSTER A 'GARDEN HOSPITAL' EXPERIENCE.



Figure 48 Source (from left): <http://www.alpolic-america.com/en/architecture-blog/Innovative-Singapore-Hospital-Uses-Customized-ALPOLIC-Panels> (accessed: September 2016); <http://www.futurarc.com/index.cfm/web-exclusive/monthly-news-roundup/june-2013-news-roundup/> (image by Priscilla Siew, accessed: September 2016)

QUALITATIVE DESIGN BRIEF

Aims and objectives

- To provide a warm, comfortable, safe and engaging home
- To facilitate appropriate medical care for patients/clients
- To provide a Day Care facility
- To provide a base for home-based care
- To cater for temporary or permanent patients/clients
- To train informal Caregivers
- To be open to all irrespective of race, colour or creed
- To operate professionally with an underlying Islamic ethos and spirit.

Facilities

The Facility may incorporate some of the following:

- Respite Centre (overnight accommodation)
- Day Care Centre (with safe social space)
- Caregiver Training Centre
- Day clinic & Dispensary
- Income generating amenities such as a hall, auditorium, mini conference center; self-catering units for family support; children's play areas.

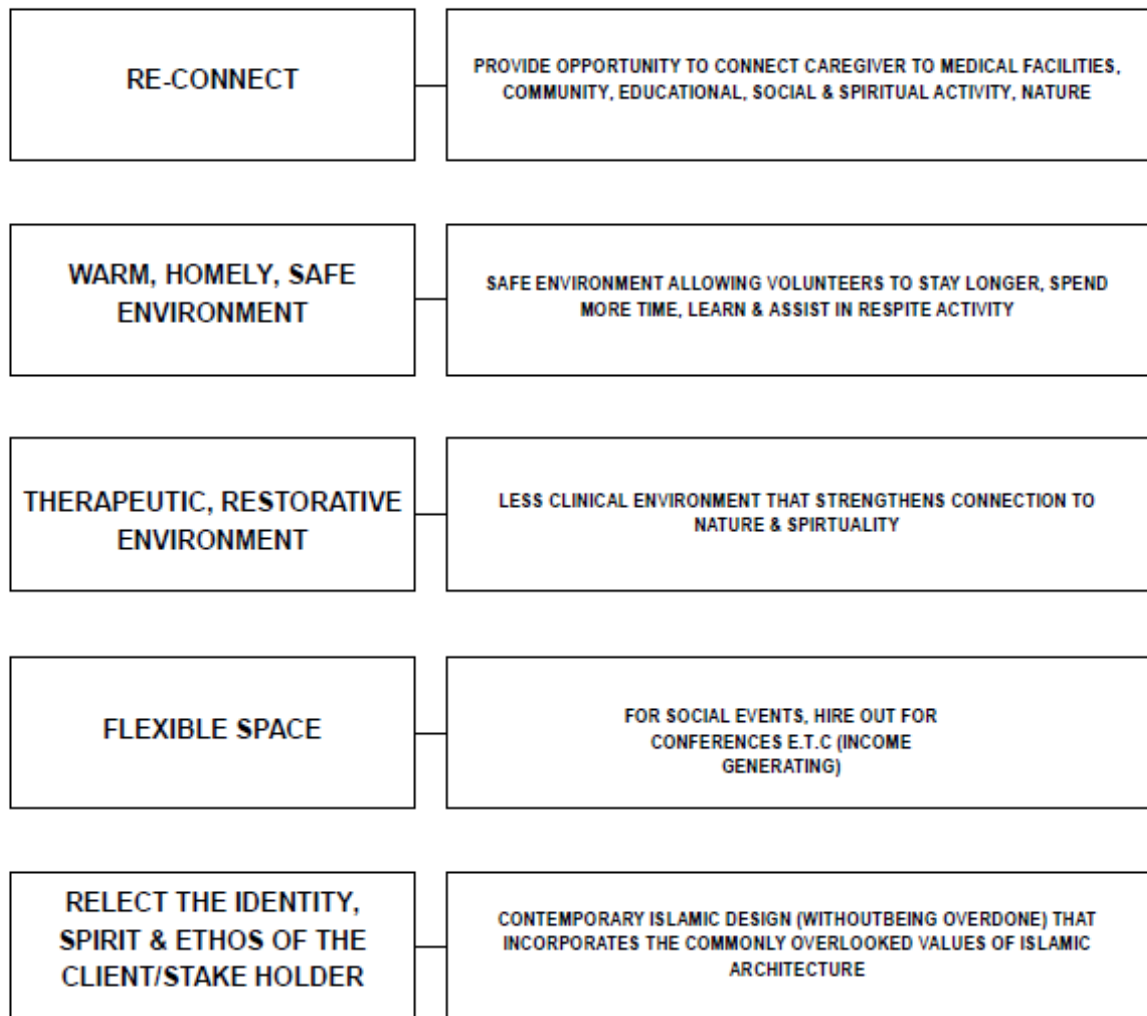


Figure 51 summary of Design Precedent Study. Source: Author (2016) Pictures from online Sources (accessed: August 2016)

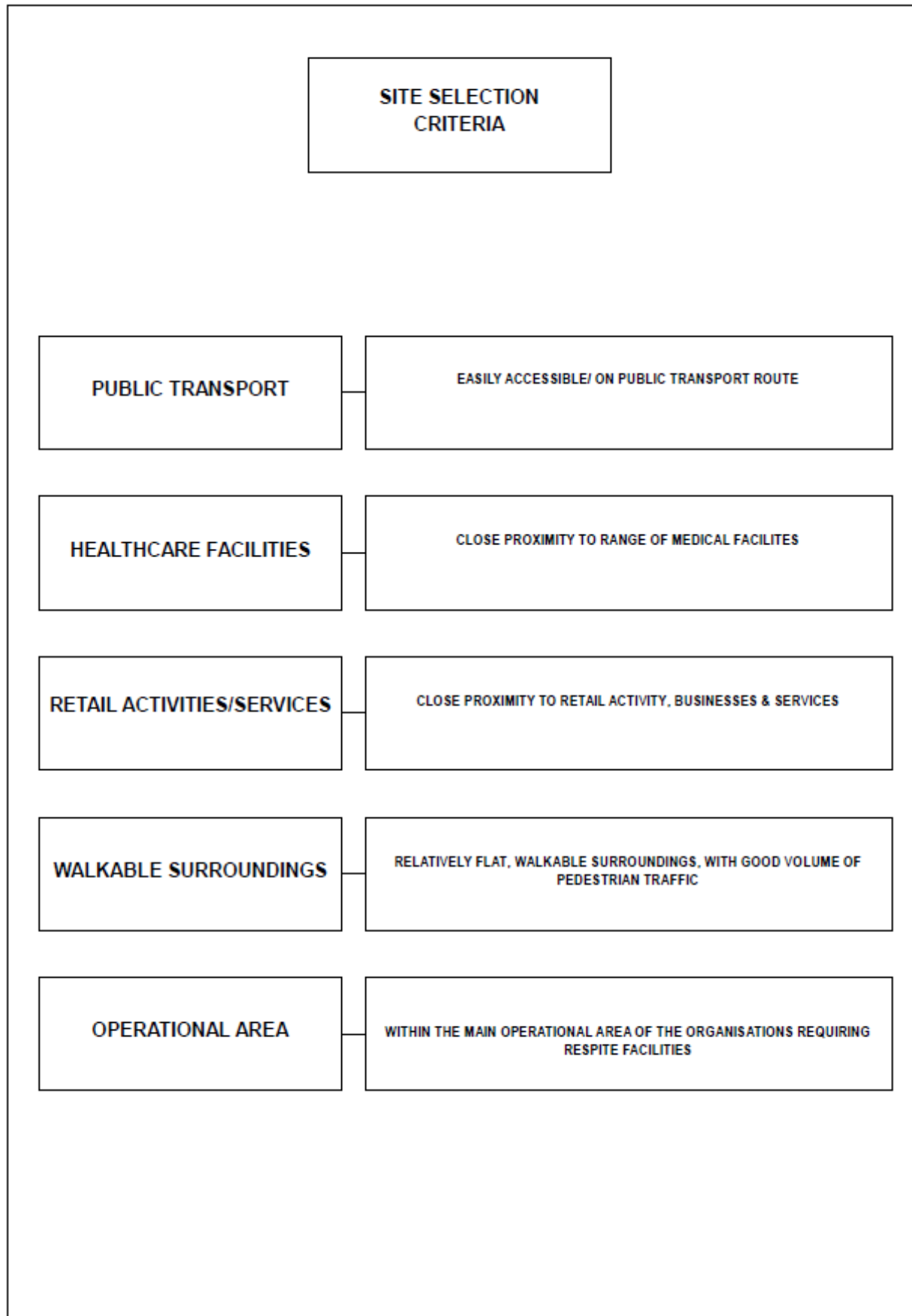


Figure 52 Summary of site selection criteria. Source: Author (2016)

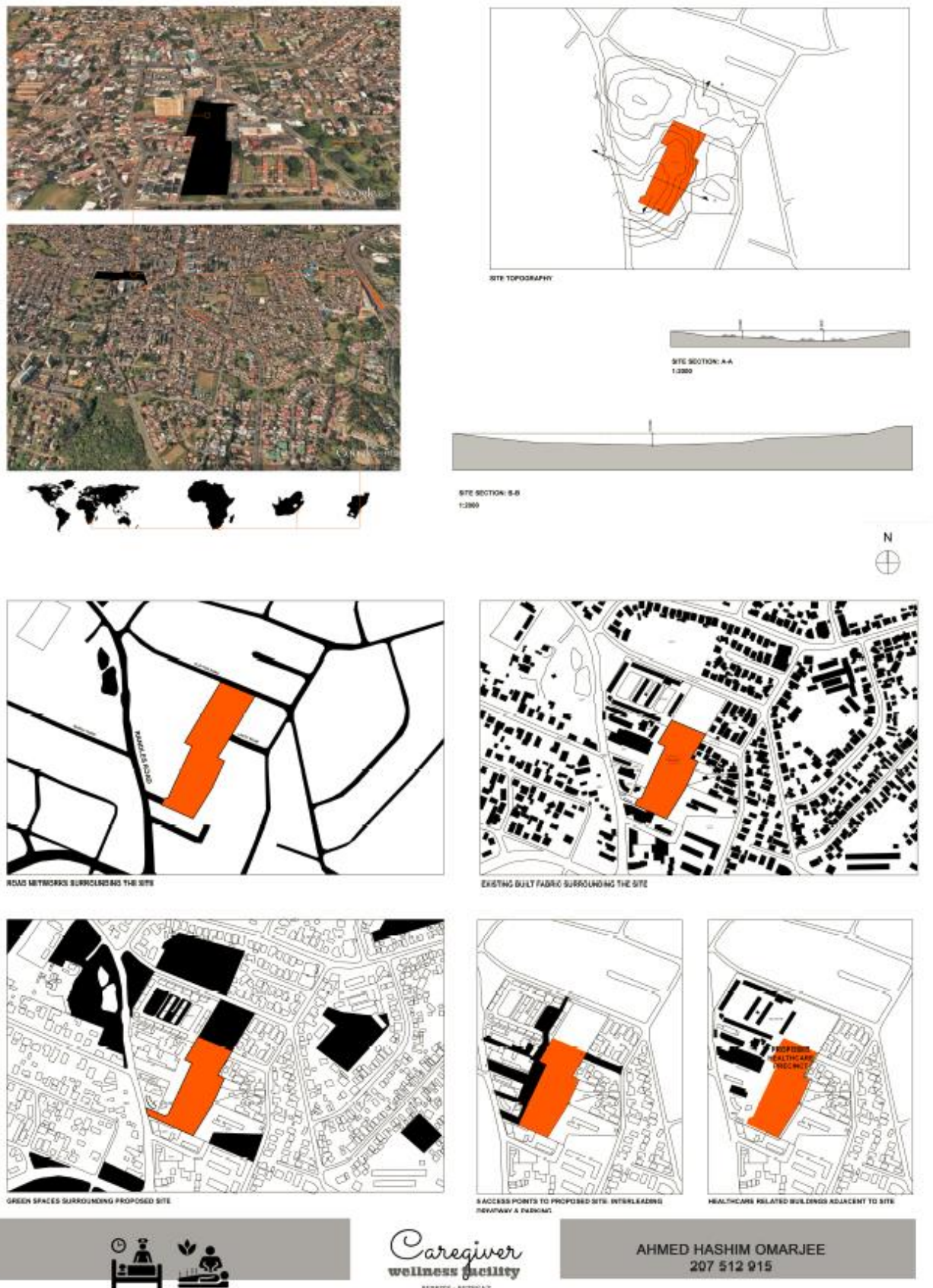




Figure 54 Early concept sketches. Source: Author (2016)





Figure 57: Design Portfolio presentation banner 2. Source: Author, (November, 2016); pictures from various online sources: KMC headquarters photographs: <http://humanspaces.com/2016/05/31/kmc-corporate-office-hyderabad-india-2012/> ; House Cornwall: <https://www.dezeen.com/2016/08/22/cornwall-gardens-house-house-change-architects-singapore-ar-chitizier-2016-a-awards-stepped-garden-swimming-pool/> ; Khoo Teck Puat Hospital: <https://www.rmj.com/the-architects-perspective-khoo-teck-puat-hospital/> ; <https://www.rmj.com/2013/10/10/parkroyal-on-pickering-by-woha/> ; <http://www.hotel-r.net/im/hotel/r/park-royal-21.jpg>; International Medical Centre, Jeddah: <http://sak-consult.com/projects.php?id=2>; Maggies Centre Photographs by Nick Turner and Maggies Centre accessed from: <http://gizmodo.com/5-buildings-designed-to-make-cancer-treatment-a-little-1559664313> (pictures accessed: November 2016)

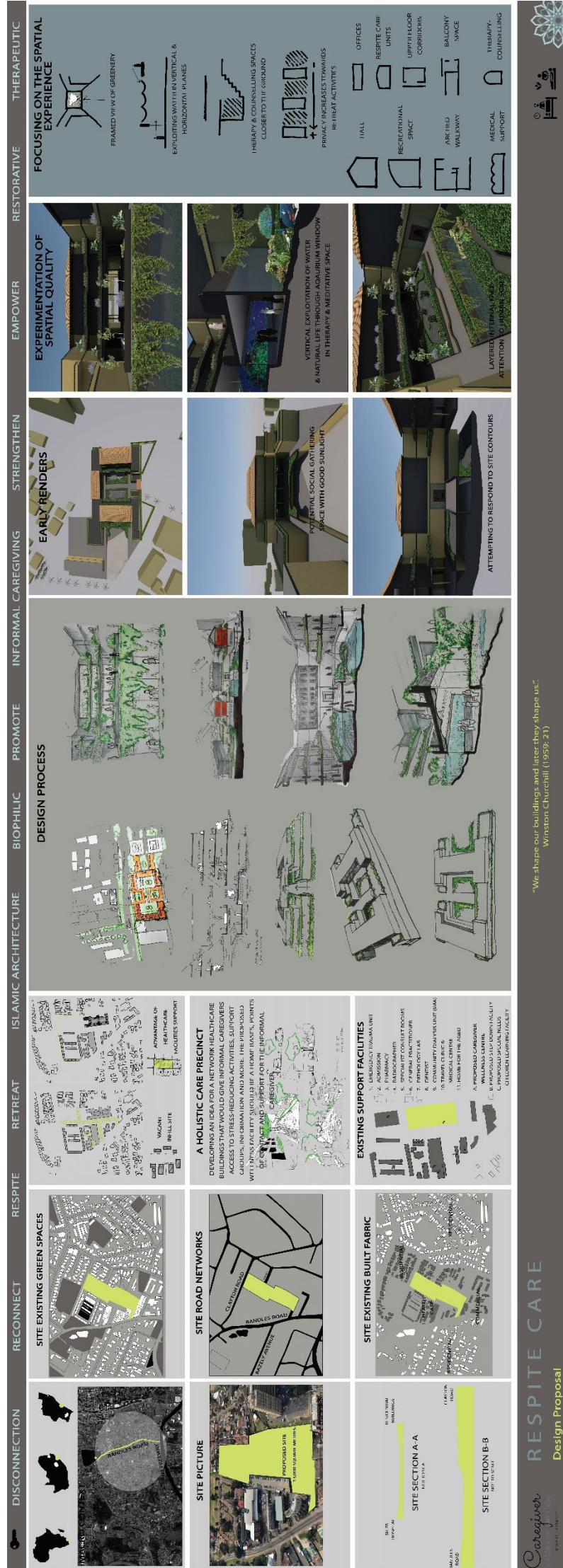


Figure 58: Design Portfolio Presentation banner 3. Source: Author, (2016); Satellite imagery adapted from Google Earth, (accessed: November 2016)

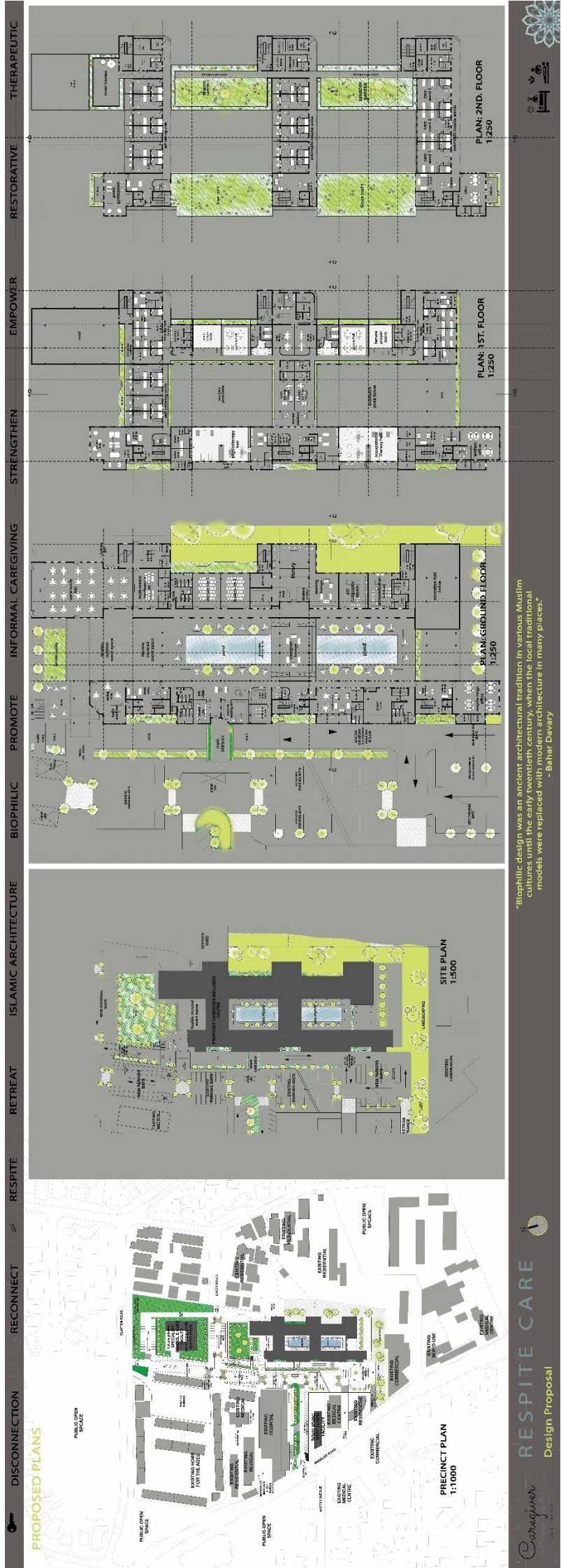


Figure 59 Design Portfolio Presentation banner 4. Source: Author, (November 2016)

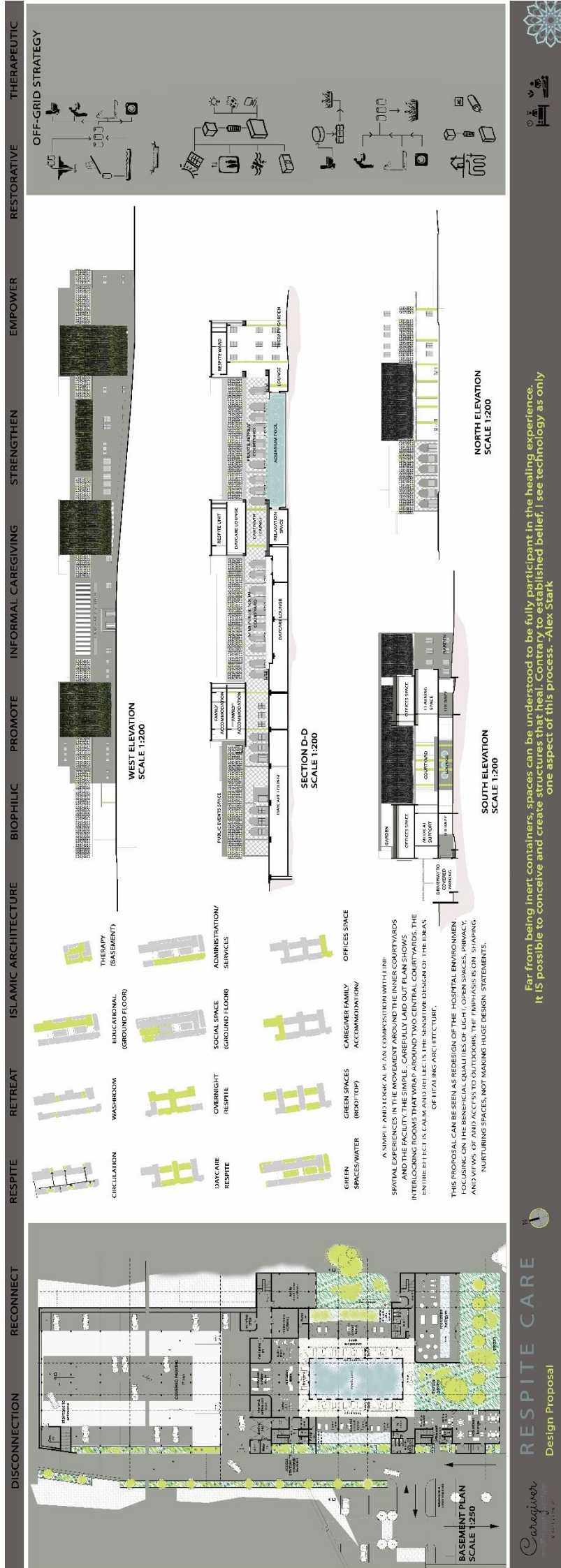


Figure 60: Design Portfolio Presentation banner 5. Source: Author, (November 2016)

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10 APPENDIX A: Ethic Approval



31 May 2016

Mr Ahmed Hashim Omarjee 207512915
School of Built Environment and Development Studies
Howard College Campus

Dear Mr Omarjee

Protocol reference number: HSS/0365/016M

Project Title: Muslim women's perceptions towards healthcare facilities and treatment: Towards a Holistic Patient-Centered Healthcare Facility for women in Durban

Full Approval – Expedited Application

In response to your application received 06 April 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shamila Naidoo (Deputy Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Mr Juan Solis
Cc. Academic Leader: Dr Cathy Sutherland
Cc School Administrator: Ms Nolundi Mzolo

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

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Website: www.ukzn.ac.za



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11 APPENDIX B: Gatekeepers Letter



04 May 2016

To whom it may concern

Ahmed Omarjee, a Masters of Architecture student in the School of Built Environment and Development Studies formally requests permission to interview members or volunteers of your institution specifically in relation to caregiving, respite care, and use of the data collected for his study. The study would greatly benefit from the perspective of a Muslim organizations like the Cancer Support Group that deals specifically with the support of Muslim women. The study may entail answering of a questionnaire or an interview.

The data would be used for his dissertation entitled: *"Muslim Women's Perceptions toward's Healthcare facilities and treatment: Towards the design of a Holistic Patient-Centered Healthcare Facility for Women in Durban"* as a requirement for a Master's degree in Architecture. The study will acknowledge the Cancer Support Group, its members or organizations affiliated to it and the results will be shared with your organization on request.

Thank you in advance.

Name: Ahmed H. Omarjee

Supervisor: J.I Solis

School of Built Environment and Development Studies

Email: 083 384 9766

Tel number: jisolis@live.com

Permission to use data granted by:

Name: ZOHRA JADWAT

Signature: [Handwritten Signature]

Date: 19/05/2016

Name of Department: _____

Name of Organisation: AL-ANSAAR CANCER SUPPORT GROUP

PHONE NO: 082 220 3131

Built Environment and Development Studies, University of KwaZulu-Natal, Howard College Campus, Durban 4041

12 APPENDIX C: Informed Consent

Information Sheet and Consent to Participate in Research

01 December 2015

To Whom it may concern

I, Ahmed Omarjee, a Master in Architecture (M. Arch) student at the University of KwaZulu-Natal, am undertaking a research project to determine how patient-centred healthcare can help minorities overcome cultural or religious challenges, with the main objective of proposing a design of a new healthcare facility for women in Durban.

You are being invited to consider participating in a local study - *the perceptions of Muslim women regarding healthcare facilities and treatment: Towards a patient-centered healthcare facility for women in Durban*. The aim and purpose of this research is to uncover challenges faced by minorities like Muslim women with regard to their cultural practices and the challenges they face. The study is expected to enroll as many Muslim women patients and medical practitioners as possible within the Durban region. It will involve the answering the following questions attached to this document. The duration of your participation if you choose to enroll and remain in the study is expected to be approximately 10 minutes. This study has no funding allocated and does not involve any monetary gain.

The study does not involve any known risk or discomforts. We hope that the study will create further interest in the study of patient-centered healthcare design in South Africa. Furthermore, it will help us understand the needs and challenges faced by a minority. Participation in this research is voluntary and you may withdraw from answering the questionnaire at any point, and that in the event of withdrawal of participation you will not incur penalty. There are no consequences to the participant for withdrawal from the study.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number pending). In the event of any problems or concerns/questions, you are welcome to contact me telephonically at 076 182 3929 or e-mail me at ah.omarjee@gmail.com or alternatively the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

There are no costs to be incurred by participants as a result of participation in the study. Furthermore, there are no incentives or reimbursements for participation in this study. The research herein may or may not be utilized or form part of the dissertation, *The perceptions of Muslim women regarding healthcare facilities and treatment: Towards a patient-centered healthcare facility for women in Durban*. This study will be submitted in fulfilment of the requirements for the degree of Master of Architecture, in the Graduate Programme in Architecture, University of KwaZulu-Natal, Durban, South Africa.

CONFIDENTIALITY

The researcher:-

- a) shall treat all Confidential Information belonging to the other party as confidential and safeguard it accordingly; and
- b) shall not disclose any Confidential Information belonging to the other party to any other person without the prior written consent of the other party, except to such persons and to such extent as may be necessary for the performance of the Agreement or except where disclosure is otherwise expressly permitted by the provisions of the Agreement.

CONSENT

I _____ have been informed about the study entitled *The perceptions of Muslim women regarding healthcare facilities and treatment: Towards a patient-centered healthcare facility for women in Durban* by Ahmed Omarjee.

I understand the purpose and procedures of the study (add these again if appropriate).

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher on the details provided above.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

I hereby provide consent to:

Audio-record my interview / focus group discussion YES / NO

Signature of Participant

Date

Signature of Witness
(Where applicable)

Date

Signature of Translator
(Where applicable)

Date

13 APPENDIX D: Sample Questionnaire

Muslim Women's Perception's Towards Healthcare Facilities and Treatment: Towards a Holistic Patient-Centered Healthcare Facility for Women in Durban

Questionnaire (Revision D – JUNE 2016):

The aim of this questionnaire is to gauge current awareness or ignorance regarding respite care and note Muslim Women Caregivers' and Volunteers' perceptions, attitude and recommendations with regard to a proposed Caregiver Respite Facility for Women in Durban.

SECTION A: QUESTIONS TO BE ASKED TO INFORMAL CAREGIVERS:

AWARENESS REGARDING RESPITE:

1. Have you been actively involved in Caregiving of a family member/loved one within the last 5 years?
2. Are you familiar with the concept of short term care/respite care/palliative care facilities?
3. What, in your opinion, is the function of a respite care/hospice facility?
4. What is your opinion regarding development of a Respite Facility for Muslim Women in Durban?
5. What considerations should be taken into account when designing a facility for Muslim Women?

CAREGIVING CHALLENGES IN DURBAN:

6. What are the typical challenges that can be made easier if a short-term respite-care facility is made accessible to individuals involved in informal caregiving?
7. How can caregiver short term breaks (respite) be beneficial to individuals involved in informal caregiving?
8. Do you think a change of environment is important for a Caregiver/Care recipient?
9. What would you like to have within a Caregiver Respite facility to make it more beneficial to the Caregivers?
10. How important is having people who understand your spiritual practices around you while in need of care?
11. How important is family visitation and support to you?
12. Will the availability of the following facilities affect one's choice of a Respite Facility?
 - a. Halal food kitchen ☐
 - b. Privacy ☐
 - c. Allow family members to visit ☐
 - d. Allow the Caregiver to overstay ☐
 - e. Educational classes/skill straining ☐
 - f. Space for Spiritual activity (ibadah) ☐
 - g. Environment with Warm/homely feel ☐

THE ENVIRONMENT:

1. How can an environment/spaces be more conducive to healing?
2. How do you view spirituality in relation to the healing process? Is there a connection?
3. How can a space feel more spiritual or help enhance spirituality?
4. Does a spiritual space need to look Islamic or display Islamic design?
5. Does Arabic calligraphy of Quranic verses evoke a sense of spirituality within you?

6. What, in your opinion, would make up a spiritual space/environment?
7. Would a spiritual space be a small confined area or a large volume space?
8. Do you have memories of a space/building that evoked spiritual feeling?
9. Can natural spaces with enhance the feeling of spirituality?
10. How do you feel about integrating alternative therapies like Hijama (cupping), diet, fasting or Ruqya (Quranic healing) into a Caregiver Respite facility?

SECTION B: QUESTIONS TO BE ASKED TO VOLUNTEERS:

1. What major challenges do Care-recipients/Caregivers that require a respite facility face?
2. What are some of the reasons why the need for short term respite care increasing?
3. What are your views on the need for Respite Healthcare facilities in Durban?
4. What is your idea of a successful respite care facility? Would it focus on the Caregiver or the care-recipient?
5. Is there a need to focus on the wellness of informal Caregivers?
6. What in your, opinion are the benefits of developing a Respite Care facility in Durban for:
 - a. the Care-recipients
 - b. the Caregivers
7. Would potential users of the facility (Muslim Women) want to be isolated or want increased social atmosphere?
8. What duration would be considered short term respite?
9. Is it important to give such a facility visibility and unique identity and a presence?
10. How can a facility be designed to reduce reluctance to use Respite Facilities?
11. What should such facility include or exclude in terms of activity or function?
12. Should such a facility be isolated in location or joined with other community/religious functions:

Mosque
 Madressah
 Youth centre
 Library/Media centre
 Health spa/ Guest house
 Caregiving skills training centre
 Social gathering space
 retail/coffee shops
 parks and gardens

13. What additional facilities could create attract more female volunteers to stay longer or increase engagement with such a facility?
14. What facilities can be included to make management task easier for staff or allow volunteers to be more comfortable to stay longer?
15. What are your recommendations for a Respite Care facility?

